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MIAMI INTERNATIONAL AIRPORT DATA PACKAGE NUMBER 4. AIRPORT IMPR--ETC(U)
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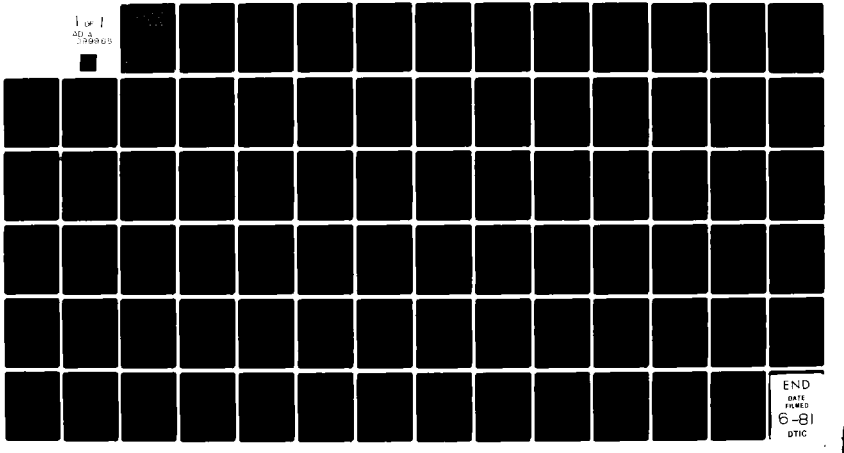

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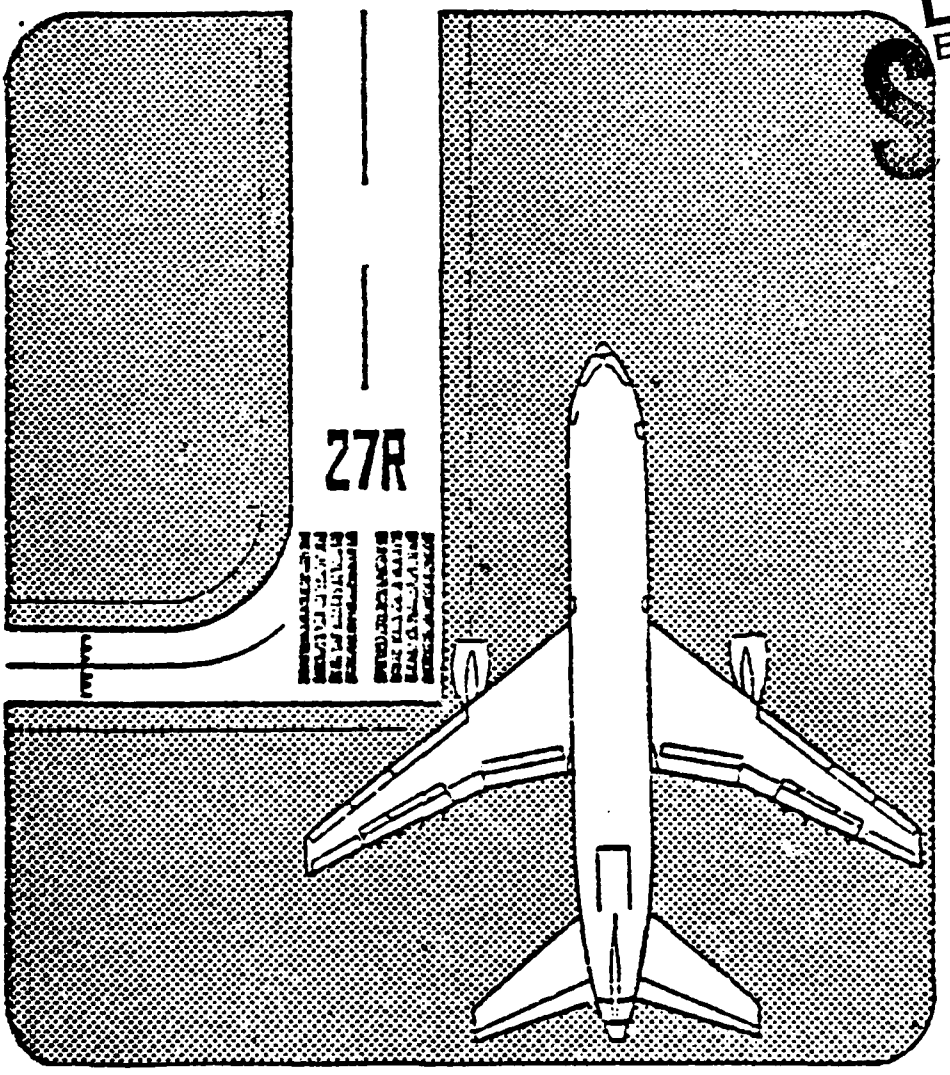
MIAMI INTERNATIONAL AIRPORT

DATA PACKAGE NO. 4

AIRPORT IMPROVEMENT TASK FORCE DELAY STUDIES



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MIAMI INTERNATIONAL AIRPORT

DATA PACKAGE NO. 4 Number

~~Miami~~

Airport Improvement Task Force Delay Studies.

11 August 1979

(12) 82

Prepared by:

Analysis Branch, ANA-220
National Aviation Facilities Experimental Center
Atlantic City, New Jersey 08405

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Attachment A

MIAMI DELAY EXPERIMENTS
STAGE 1 AND STAGE 2
(REVISED)

Miami International Airport

Miami
Airport Improvement Task Force Delay Studies

August 1979

The following tables show the current experimental design for the Miami Delay Experiments as revised since March 1979. Stage 1 now includes all Airfield Simulation Model experiments, whereas Stage 2 includes all Annual Delay Model experiments.

The latest modifications to the Stage 1 design allow improved comparisons between the "full" and "limited" G.A. experiments in the 1983 time frame. These modifications include new experiment nos. 34, 35, 36, 37, 38, and 39, and changes to the demand or scenario in experiment nos. 8, 9, 10, and 17.

TABLE 2
MIAMI DELAY EXPERIMENTS*
STAGE 1

Experiment Number	Model	Study Case[a]	Arrival Runways	Departure Runways	Weather	Demand	ATC System Scenario[b]	Near-term Improvements[c]
1	ASM[d]	1	9L, 9R, 12	9L, 9R, 12	VFR1	Todays	Todays	None
7	ASM	1	9L, 9R, 12	9L, 9R, 12	VFR1	1983[l]	Todays	None (Full G. A.)
11	ASM	1	9L, 9R, 12	9L, 9R, 12	VFR1	1983[l]	1983	1983[e] (Full G. A.)
14	ASM	1	9L, 9R, 12	9L, 9R, 12	VFR1	1983[m]	1983	1983[e, g] (50% G. A. Reduction)
4	ASM	4	9L, 9R	9L, 9R, 12	IFR1	Todays	Todays	None
34	ASM	4	9L, 9R	9L, 9R, 12	IFR1	1983[l]	Todays	None (Full G. A.)
9	ASM	4	9L, 9R	9L, 9R, 12	IFR1	1983[m]	1983	g (50% G. A. Reduction)
35	ASM	4	9L, 9R	9L, 9R, 12	IFR1	1983[m]	1983	1983[e, g] (50% G. A. Reduction)
6	ASM	8	None	9L	IFR2	Todays	Todays	None
10	ASM	8	None	9L	IFR2	1983[m]	1983	g (50% G. A. Reduction)
21	ASM	9	9L, 9R	9L, 9R, 12	IFR2	1983[m]	1983	1983[e, g] (50% G. A. Reduction)
2	ASM	2	27L, 27R, 30	27L, 27R, 30	VFR1	Todays	Todays	None
8	ASM	2	27L, 27R, 30	27L, 27R, 30	VFR1	1983[l]	Todays	None (Full G. A.)
36	ASM	2	27L, 27R, 30	27L, 27R, 30	VFR1	1983[l]	1983	1983[e] (Full G. A.)
37	ASM	2	27L, 27R, 30	27L, 27R, 30	VFR1	1983[m]	1983	1983[e, g] (50% G. A. Reduction)
3	ASM	3	27L, 27R	27L, 27R, 30	VFR2	Todays	Todays	None
38	ASM	3	27L, 27R	27L, 27R, 30	VFR2	1983[l]	Todays	None (Full G. A.)
17	ASM	3	27L, 27R	27L, 27R, 30	VFR2	1983[m]	1983	g (50% G. A. Reduction)
12	ASM	7	27R, 30	27L, 27R	VFR2	1983[m]	1983	1983[e, g] (50% G. A. Reduction)
5	ASM	5	27L, 27R	27L, 27R	IFR1	Todays	Todays	None
39	ASM	5	27L, 27R	27L, 27R	IFR1	1983[l]	Todays	None (Full G. A.)
15	ASM	5	27L, 27R	27L, 27R	IFR1	1983[l]	1983	1983[e] (Full G. A.)
20	ASM	5	27L, 27R	27L, 27R	IFR1	1983[m]	1983	1983[e, g] (50% G. A. Reduction)
12A	ASM	7	27R, 30	27L, 27R	VFR2	1983[m]	1983	1983[p, g] (50% G. A. Reduction)
24	ASM	5	27L, 27R	27L, 27R	IFR1	Todays	Todays	i

[a] Study cases are defined in Figure III-1 of the Miami International Airport Technical Plan (Oct. 1978).

[b] FAA will describe impact of pre-1985 and post-1985 ATC systems on model inputs (as per report No. FAA-EM-78-8A).

[c] Near-term improvements are described in Appendix B of the Miami International Airport Technical Plan.

[d] Airfield Simulation Model.

[e] Improvement items 1, 2, 3, 7, 9, and 10 as defined by the Miami Delay Studies' Task Force on 3/16/79 are modeled in these experiments.

[g] 50% reduction in general aviation achieved by upgrading Opa Locka and Tamiami General Aviation Reliever Airports.

[i] Improvement #6 is the use of 2 mile in-trail staggered parallel approaches.

[l] 1983 full schedule assumes no G. A. relocation out of Miami between 1978 and 1983.

[m] 1983 limited schedule assumes a 50% G. A. reduction at Miami due to upgrading of reliever airports.

[p] All improvements of footnote "e" except for improvement item #10 (aircraft are being towed instead of taxied in 12A).

* Stage 1 experiments as revised by discussions with the Miami Delay Studies' Task Force since 1/24/79

TABLE 9

MIAMI DELAY EXPERIMENTS*

STAGE 2

Experiment Number	Model	Study Case	Arrival Runways	Departure Runways	Weather	Demand	ATC System Scenario	Near-term Improvements
16	A DM[h]	n.a.	n.a.	n.a.	n.a.	Todays	Todays	None
29	ADM	n.a.	n.a.	n.a.	n.a.	Pre-1985[m]	Todays	None
27	ADM	n.a.	n.a.	n.a.	n.a.	Pre-1985[m]	Pre-1985	None
28	A DM	n.a.	n.a.	n.a.	n.a.	Pre-1985[m]	Todays	Pre-1985[e, g]
26	A DM	n.a.	n.a.	n.a.	n.a.	Pre-1985[m]	Pre-1985	Pre-1985[e, g]
33	ADM	n.a.	n.a.	n.a.	n.a.	Post-1985[q]	Todays	None
30	ADM	n.a.	n.a.	n.a.	n.a.	Post-1985[q]	Post-1985	None
32	A DM	n.a.	n.a.	n.a.	n.a.	Post-1985[q]	Todays	Post-1985[r]
31	A DM	n.a.	n.a.	n.a.	n.a.	Post-1985[q]	Post-1985	Post-1985[r]

[e] Improvement items 1, 2, 3, 7, 9, and 10 as defined by the Miami Delay Studies' Task Force on 3/16/79.

[g] 50% reduction in general aviation achieved by upgrading Opa Locka and Tamiami General Aviation Reliever Airports.

[h] Annual Delay Model

[m] 1983 limited schedule assumes a 50% G. A. reduction at Miami due to upgrading of reliever airports.

[q] Post-1985 Demand to be provided by the Miami Delay Studies' Task Force.

[r] Post-1985 Improvement Package to be provided by the Miami Delay Studies' Task Force.

*Stage 2 experiments as revised by discussions with the Miami Delay Studies' Task Force since 1/24/79

Attachment B

MIAMI BASELINE DEMAND SCHEDULES

Miami International Airport

Miami
Airport Improvement Task Force Delay Studies

August 1979

The following histograms show the hourly arrival/departure demands of the Stage 1 baseline aircraft schedules. The three baseline schedules are:

. 1978 VFR

. 1983 VFR, Full G.A.(No upgrading of Reliever Airports)

. 1983 VFR, Limited G.A.(50% less G.A. due to Reliever upgrading)

The baseline schedules contain proposed arrival/departure times and must have the Lateness Distribution applied before they are input to the Airfield Simulation Model. In addition, the "IFR rule" for General Aviation reduction (see page H-3 of Miami Data Package No.3) must be applied to the appropriate VFR baseline during construction of the final traffic schedules for IFR experiments. Thus, these histograms reflect the proposed VFR hourly demands as opposed to the actual demands applied to each experiment as shown in Attachment C.

The 1978 baseline schedule was developed from the Official Airline Guide for March 16, 1978, with supplementation of General Aviation Operations (see Attachment G of Miami Data Package No. 3, "Description of 1978 Demand Schedule Preparation"). The 1983 baseline schedules were developed from information provided by Mr. Peter Reaveley of the Miami Delay Studies' Task Force.

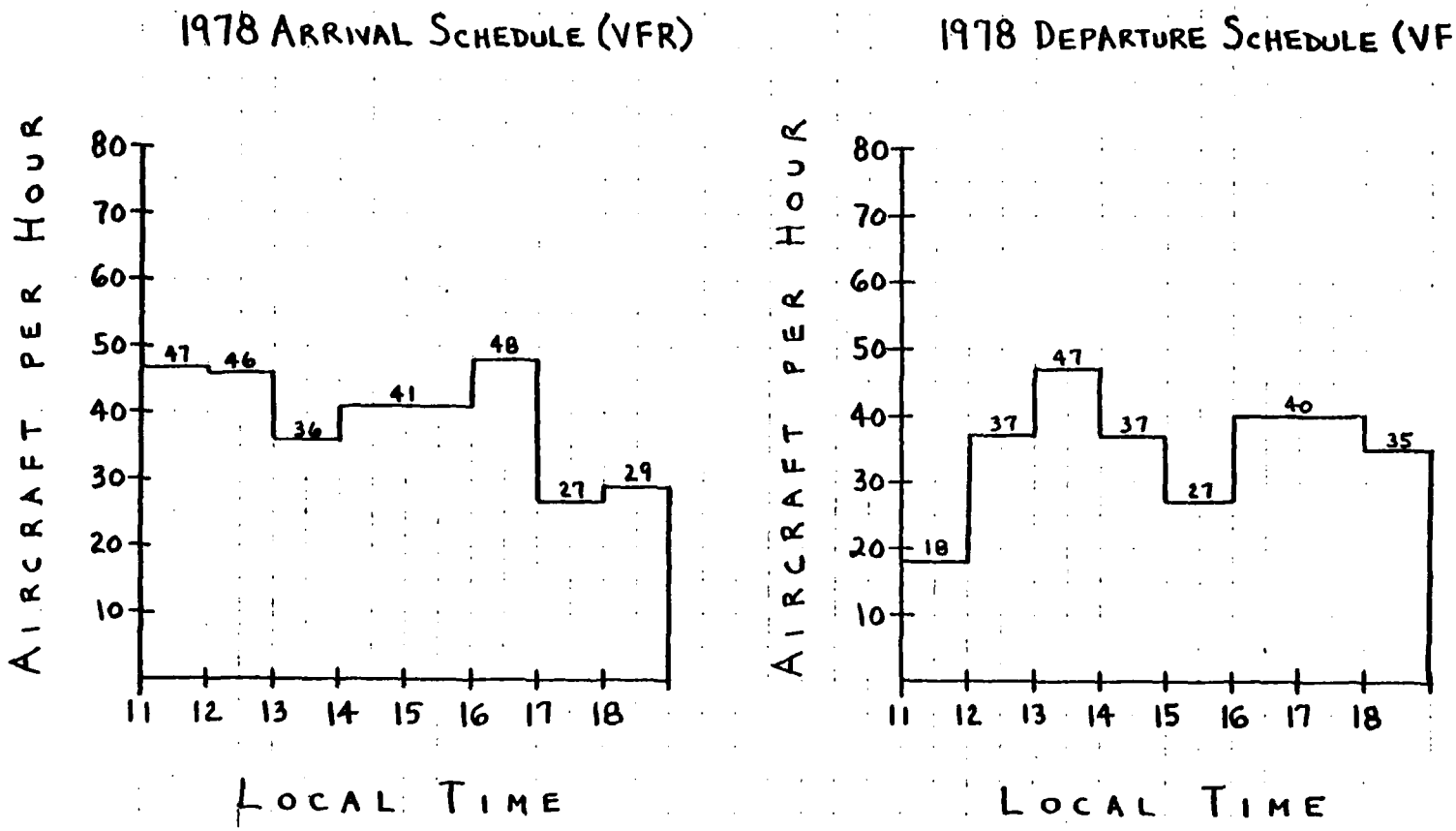

1978 Arrival Schedule (VFR)
Aircraft per Hour
80
70
60
50
40
30
20
10
47
46
36
41
48
27
29
11
12
13
14
15
16
17
18
Local Time
1978 Departure Schedule (VFR)
Aircraft per Hour
18
37
47
37
27
40
35
Local Time

Figure 1

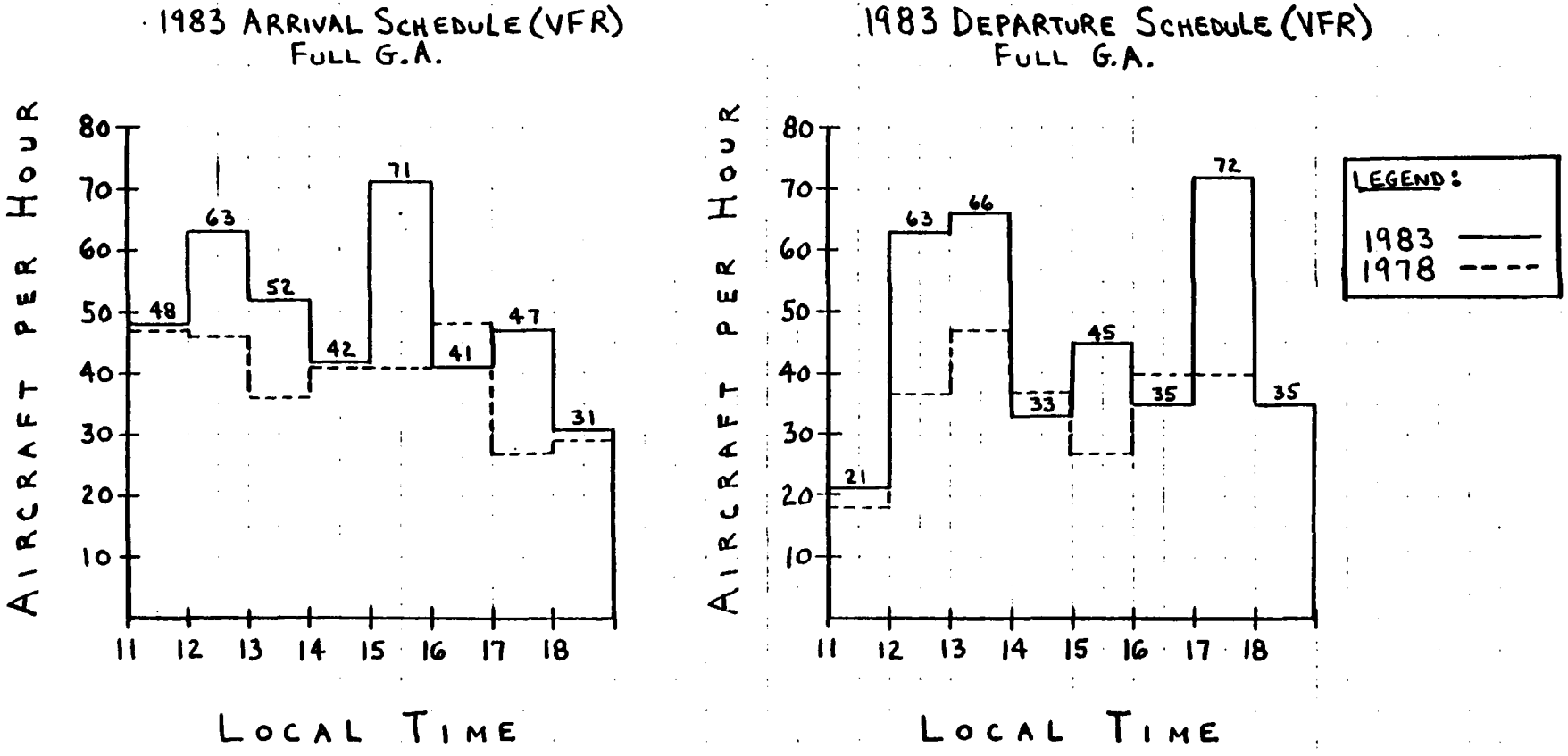
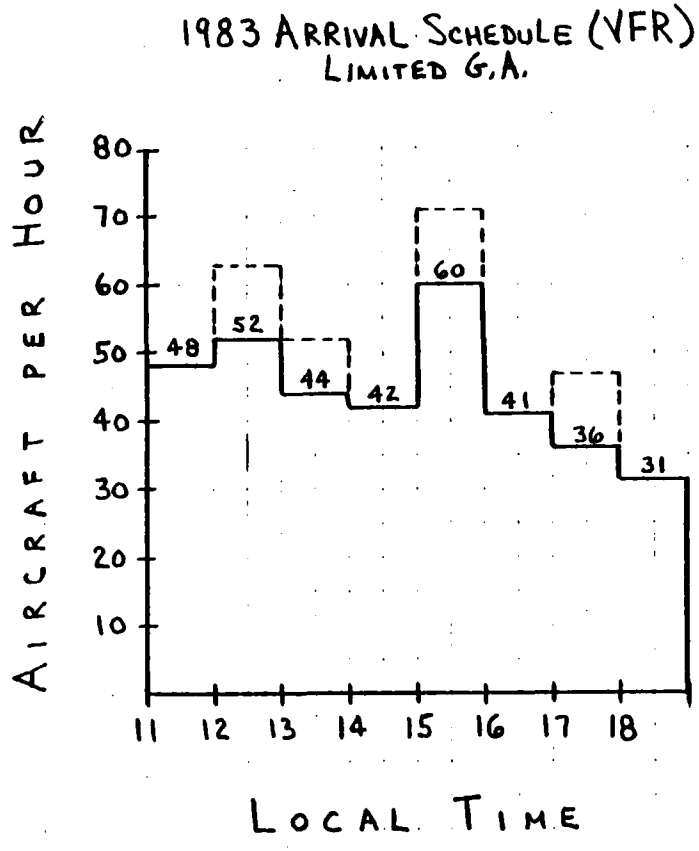

1983 ARRIVAL SCHEDULE (VFR)
FULL G.A.
AIRCRAFT PER HOUR
80
70
60
50
40
30
20
10
48
63
52
42
71
41
47
31
11
12
13
14
15
16
17
18
LOCAL TIME
1983 DEPARTURE SCHEDULE (VFR)
FULL G.A.
AIRCRAFT PER HOUR
21
63
66
33
45
35
72
35
LEGEND:
1983
1978
LOCAL TIME

FIGURE 2


1983 ARRIVAL SCHEDULE (VFR)
LIMITED G.A.
AIRCRAFT PER HOUR
80
70
60
50
40
30
20
10
48
52
44
42
60
41
36
31
11
12
13
14
15
16
17
18
LOCAL TIME

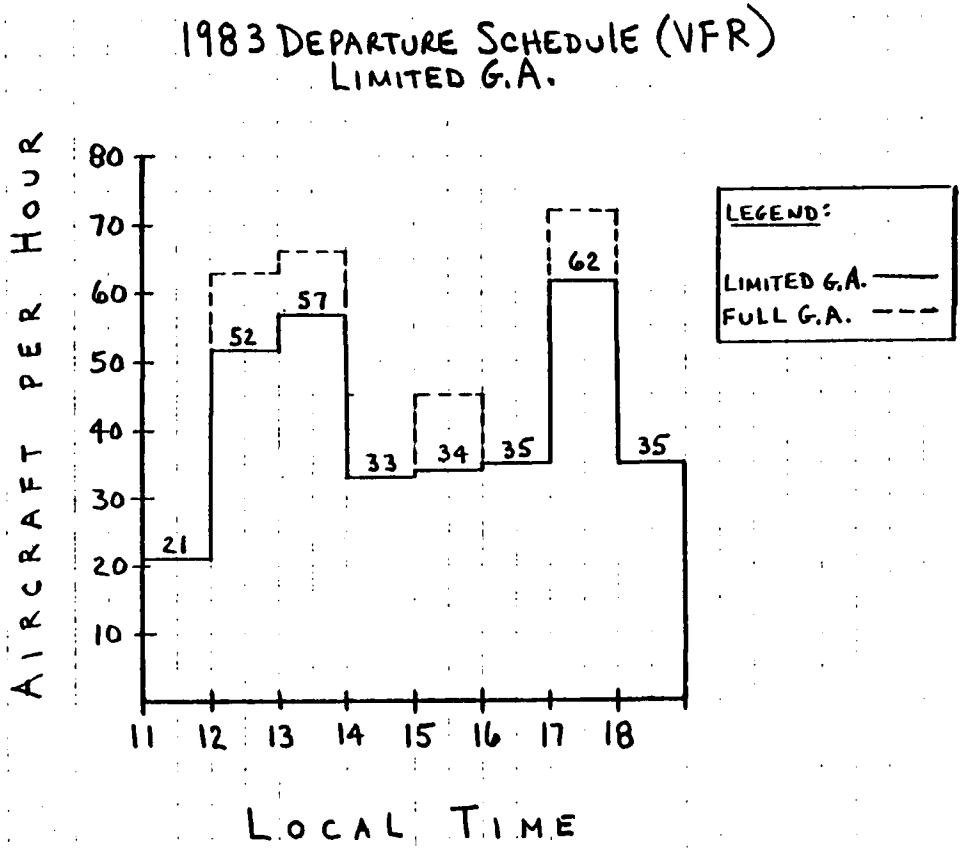
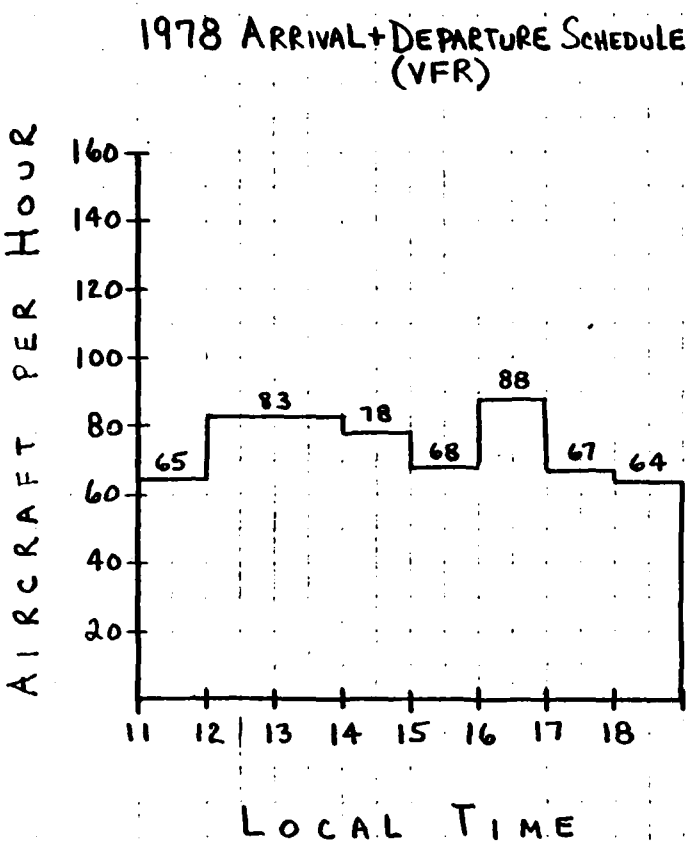

1983 DEPARTURE SCHEDULE (VFR)
LIMITED G.A.
AIRCRAFT PER HOUR
80
70
60
50
40
30
20
10
21
52
57
33
34
35
62
35
LEGEND:
LIMITED G.A.
FULL G.A.
11
12
13
14
15
16
17
18
LOCAL TIME

FIGURE 3


1978 ARRIVAL+DEPARTURE SCHEDULE
(VFR)
AIRCRAFT PER HOUR
160
140
120
100
80
60
40
20
65
83
78
68
88
67
64
11
12
13
14
15
16
17
18
LOCAL TIME

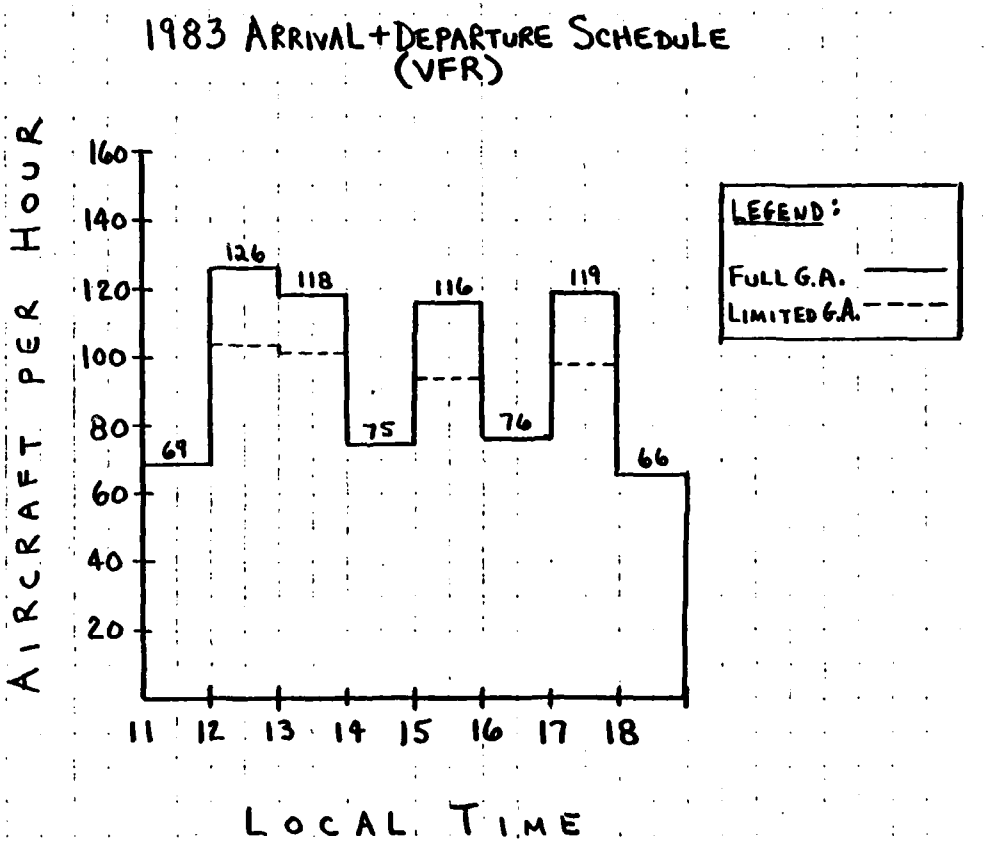

1983 ARRIVAL+DEPARTURE SCHEDULE
(VFR)
AIRCRAFT PER HOUR
160
140
120
100
80
60
40
20
69
126
118
75
116
76
119
66
LEGEND:
FULL G.A.
LIMITED G.A.
11
12
13
14
15
16
17
18
LOCAL TIME

FIGURE 4

Attachment C

MIAMI ARRIVAL/DEPARTURE SCHEDULES BY EXPERIMENT

Miami International Airport

Miami
Airport Improvement Task Force Delay Studies

August 1979

The following histograms summarize the hourly arrival and departure demands of the Stage 1 aircraft schedules by experiment. Note that these histograms were derived from the final schedules that input the Airfield Simulation Model, wherein the arrival times have been adjusted from those shown in the baseline schedules via the Miami Lateness Distribution.

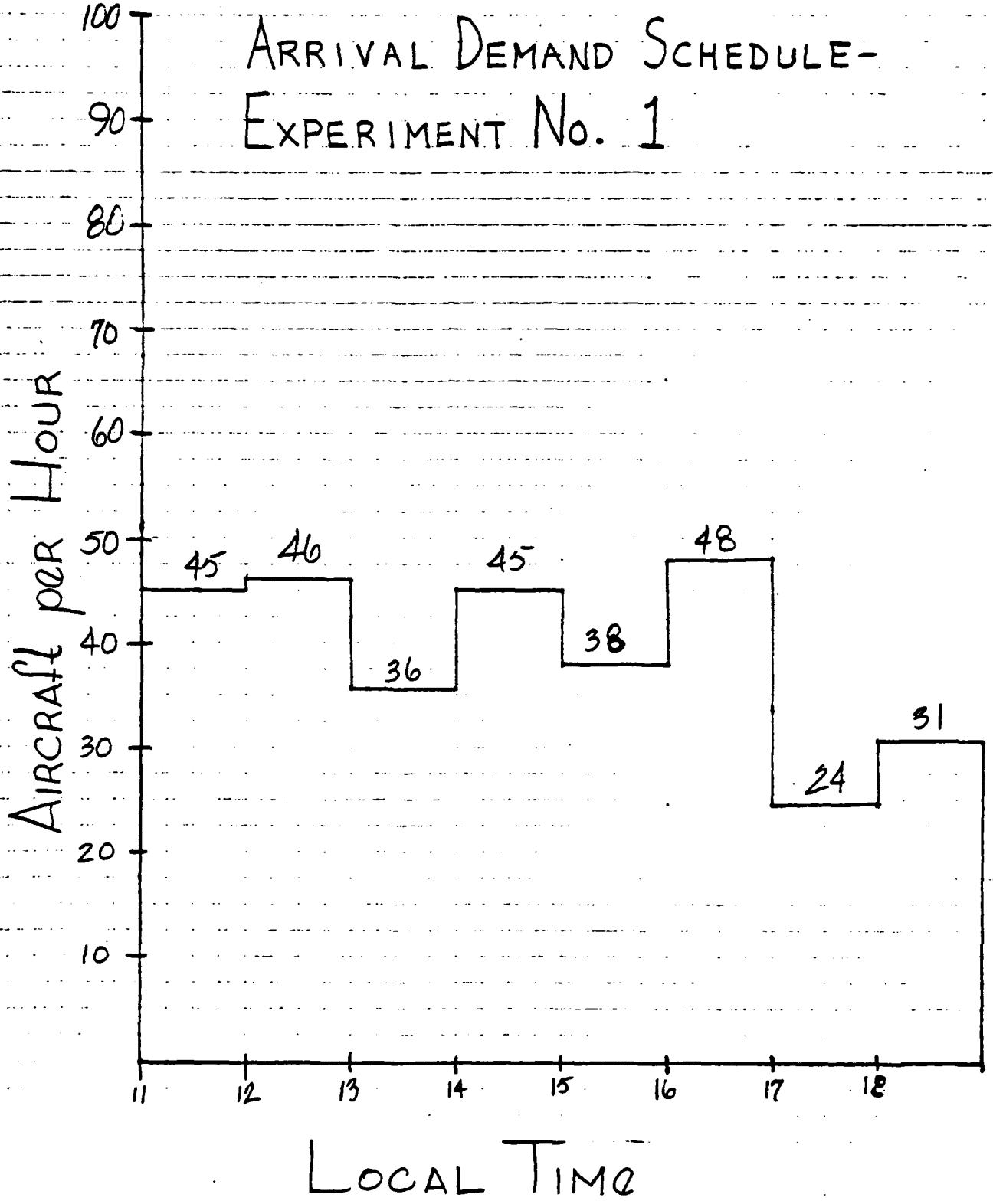
It should be noted that application of the Lateness Distribution introduces a minor degree of variability between the hourly demands of schedules derived from the same baseline. This is why separate histograms are shown for experiment nos. 1, 2, and 3, for example, although these three aircraft schedules were derived from the 1978 VFR base.

With the above in mind, the following histograms are indexed so that the arrival/departure demands for any particular experiment may be easily referenced.

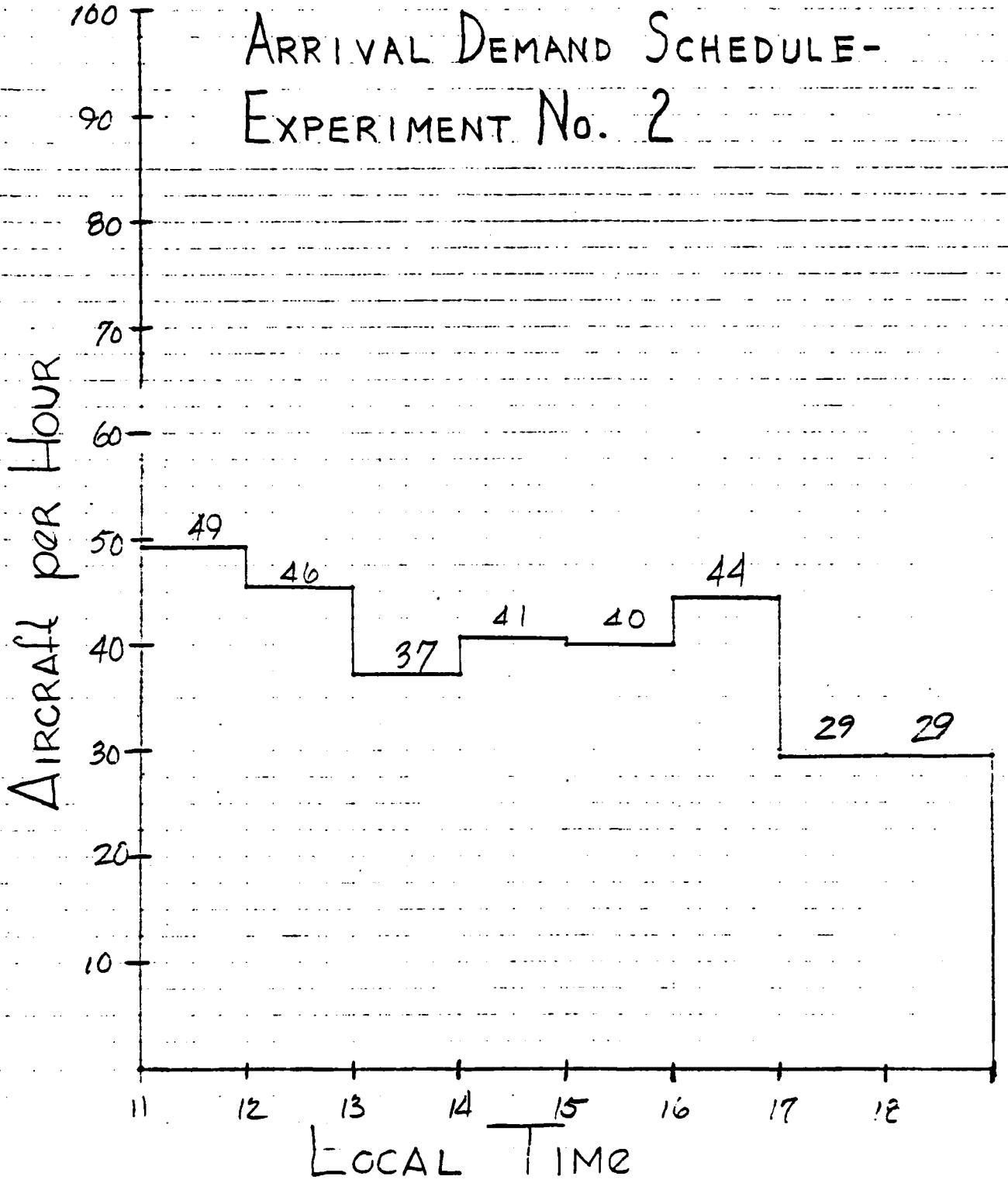
Index of Demand Schedule Histograms

Experiment No.	Arrival Demand Schedule	Departure Demand Schedule
1	C-4	C-19
7	C-9	C-22
11	C-9	C-22
14	C-13	C-24
4	C-7	C-20
34	C-17	C-27
9	C-11	C-23
35	C-11	C-23
6	C-7	C-20
10	C-11	C-23
21	C-11	C-23
2	C-5	C-19
8	C-10	C-22
36	C-10	C-22
37	C-18	C-24
3	C-6	C-19
38	C-10	C-22
17	C-15	C-24
12	C-12	C-24
5	C-8	C-21
39	C-14	C-25
15	C-14	C-25
20	C-16	C-26
12A	C-12	C-24
24	C-8	C-21

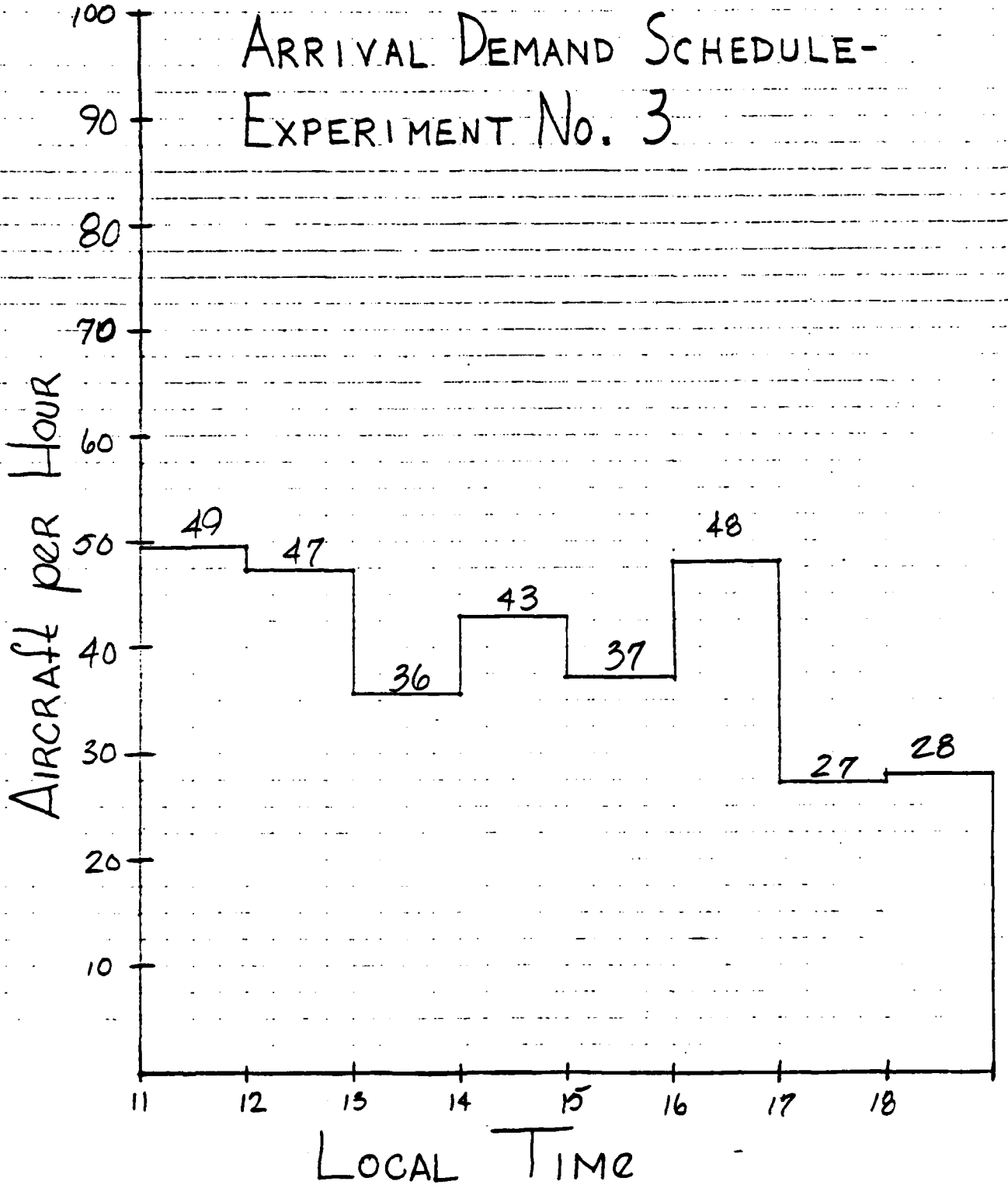
Arrival Demand Schedule-
Experiment No. 1



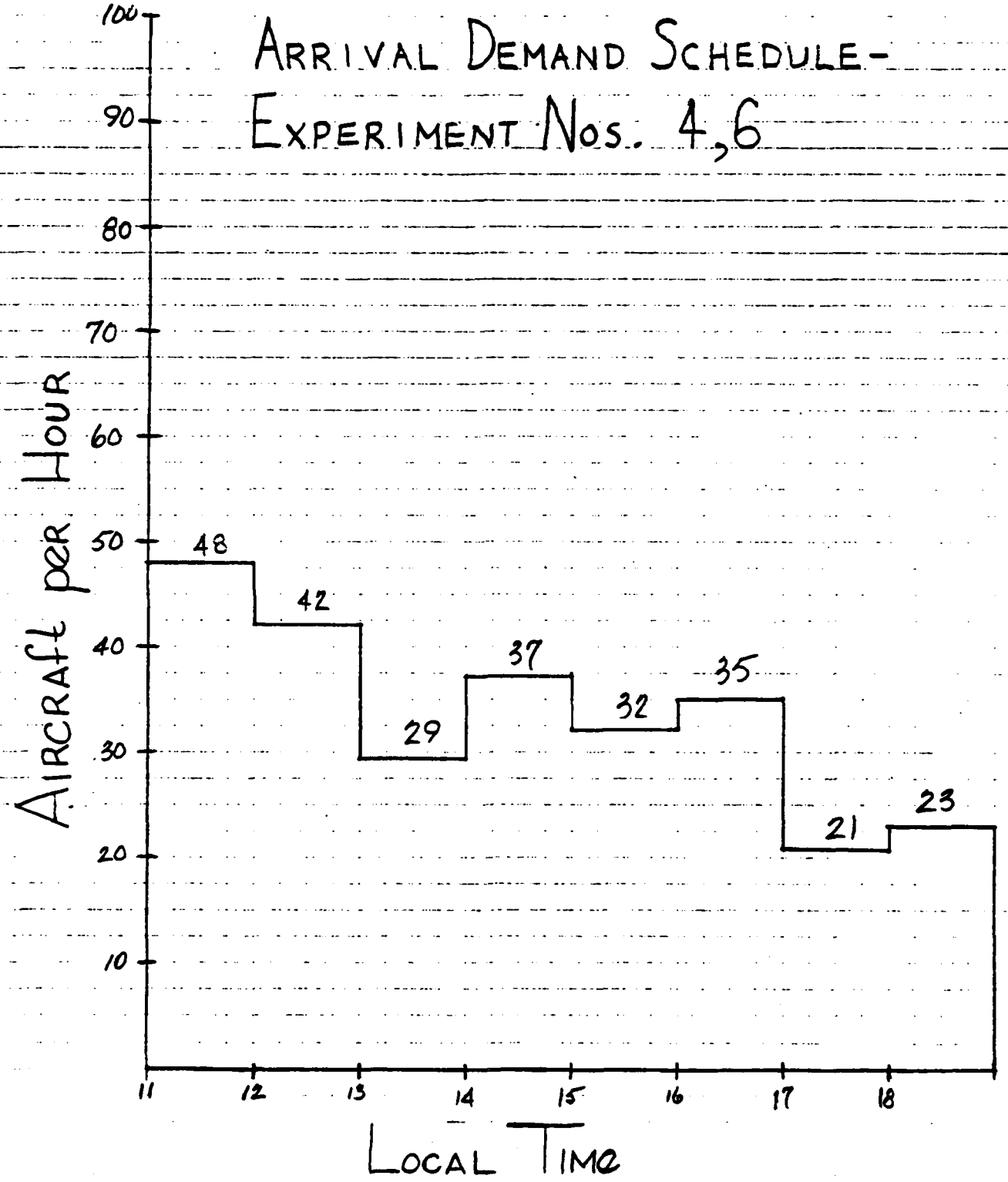
Arrival Demand Schedule-
Experiment No. 2



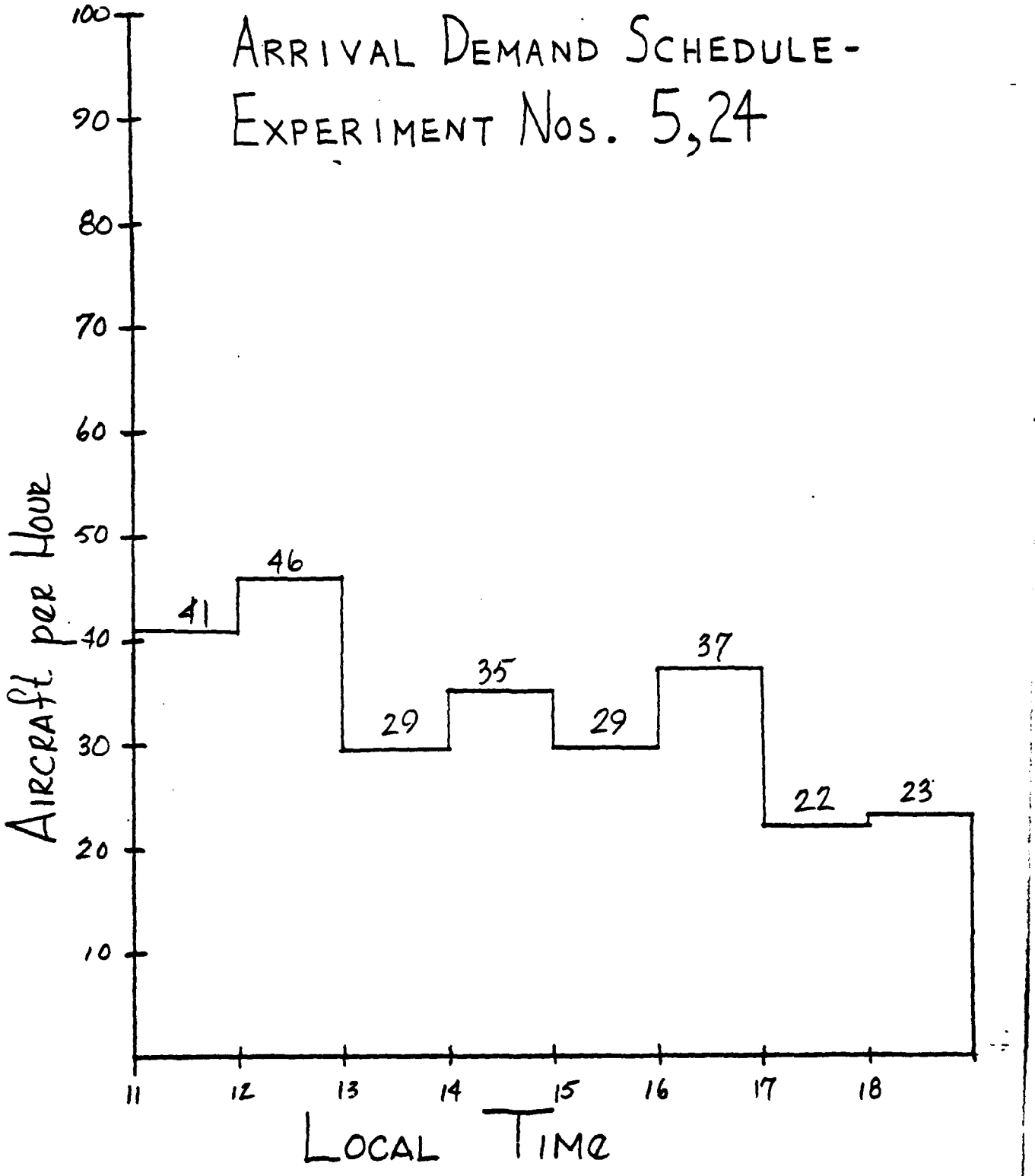
Arrival Demand Schedule-
Experiment No. 3



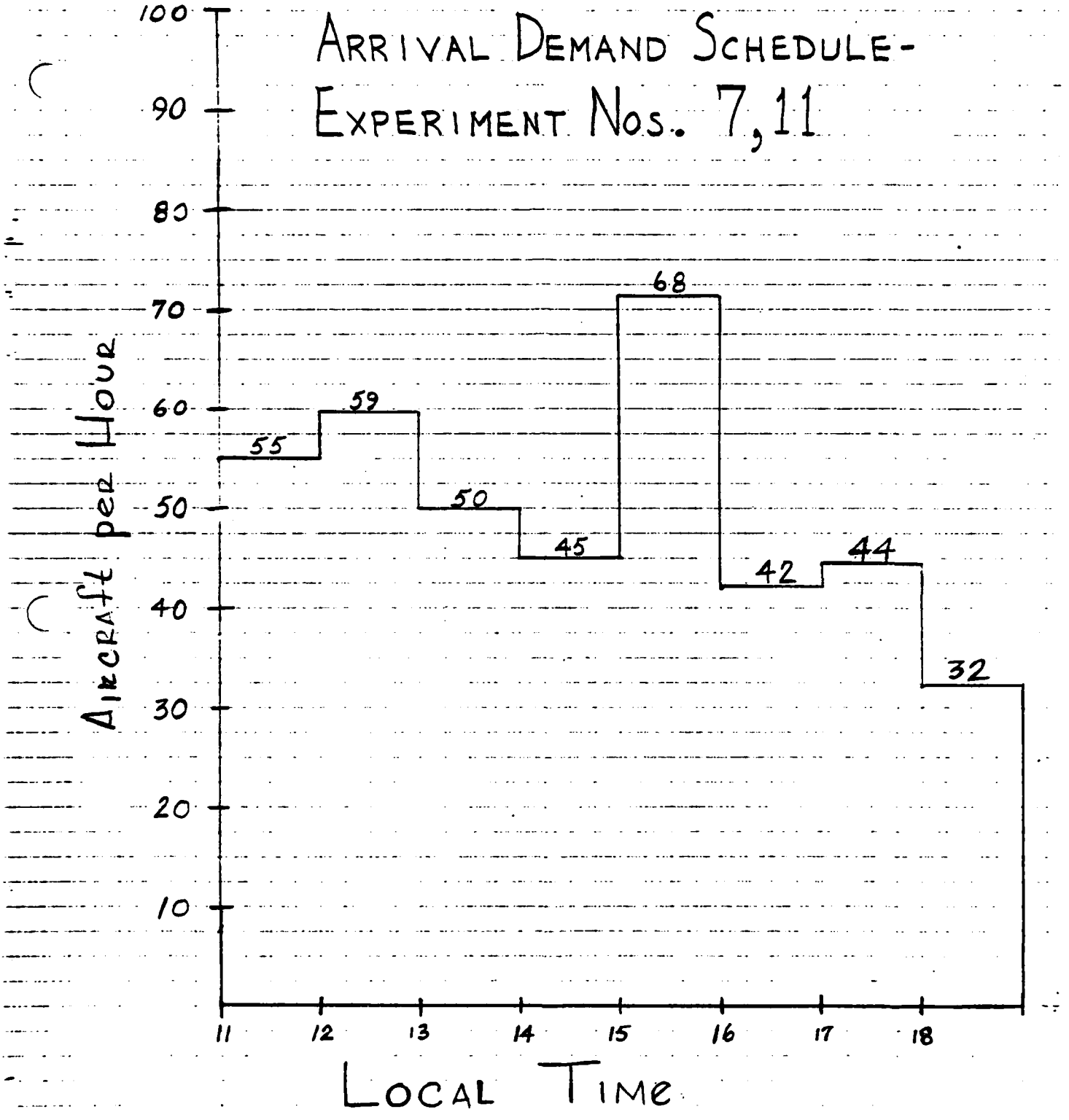
Arrival Demand Schedule-
Experiment Nos. 4,6

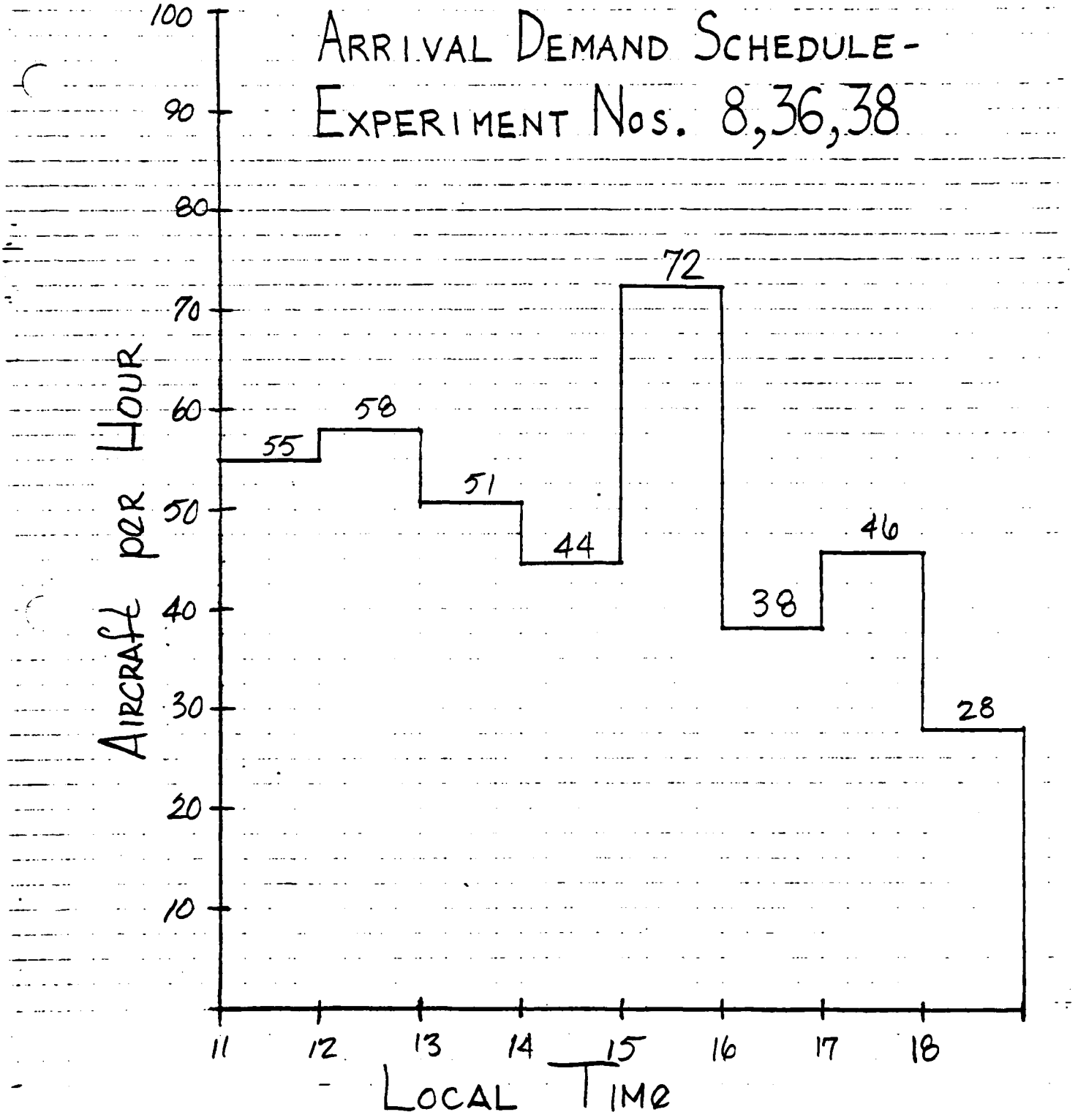


Arrival Demand Schedule-
Experiment Nos. 5,24

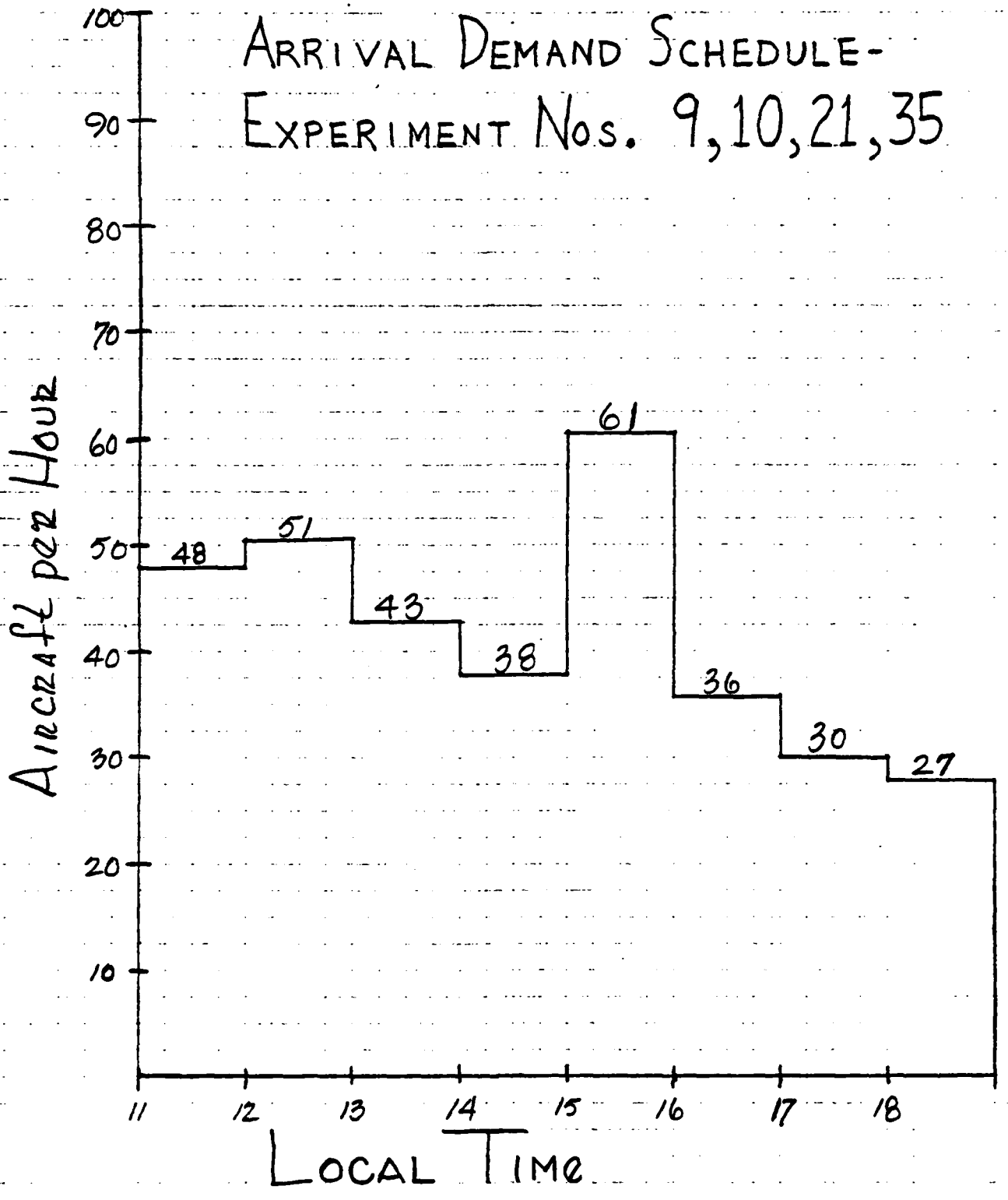


Arrival Demand Schedule-
Experiment Nos. 7, 11

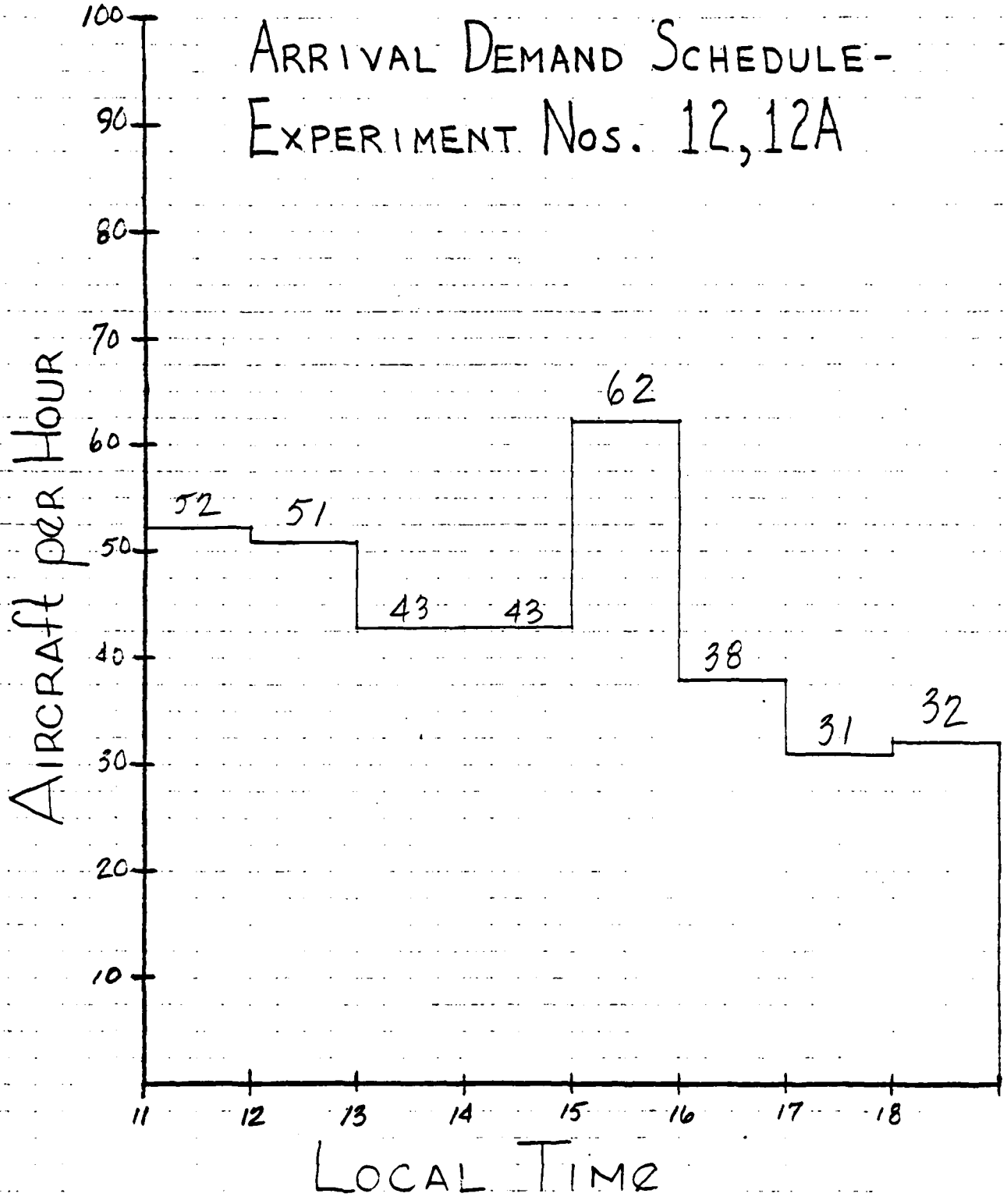



ARRIVAL DEMAND SCHEDULE-
EXPERIMENT NOS. 8,36,38
AIRCRAFT PER HOUR
100
90
80
70
60
50
40
30
20
10
55
58
51
44
72
38
46
28
11
12
13
14
15
16
17
18
LOCAL TIME

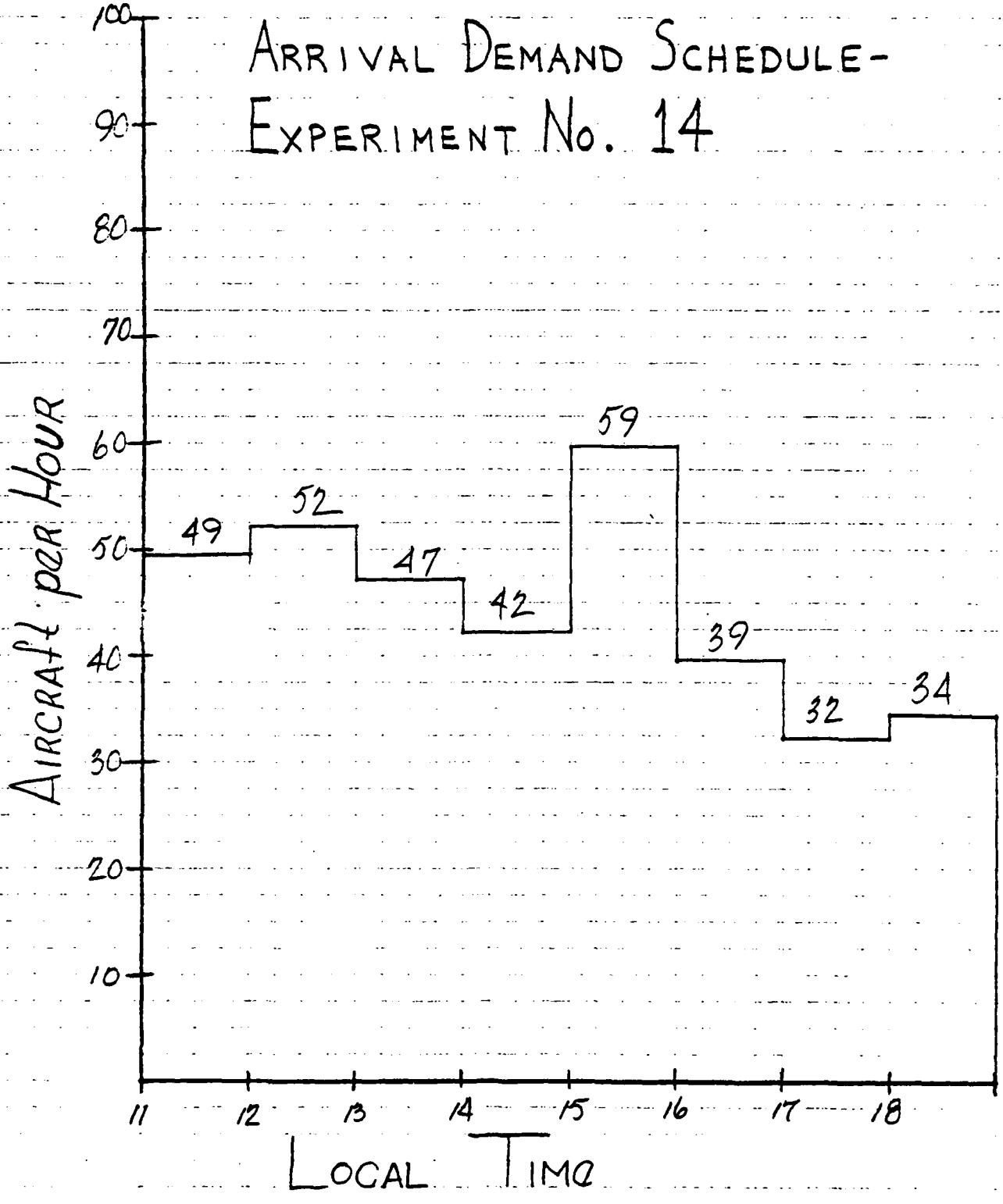
Arrival Demand Schedule-
Experiment Nos. 9, 10, 21, 35



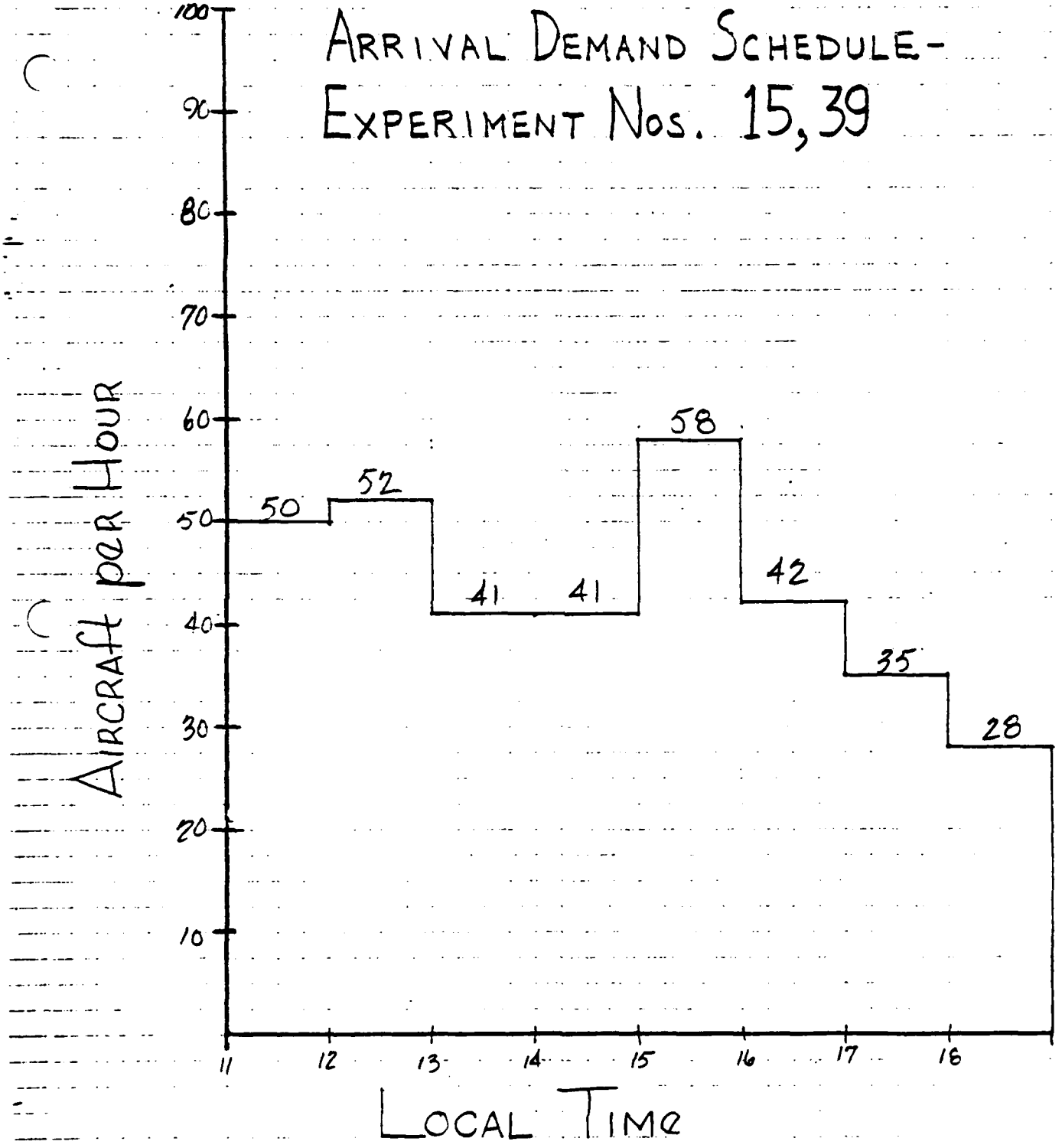
Arrival Demand Schedule-
Experiment Nos. 12, 12A

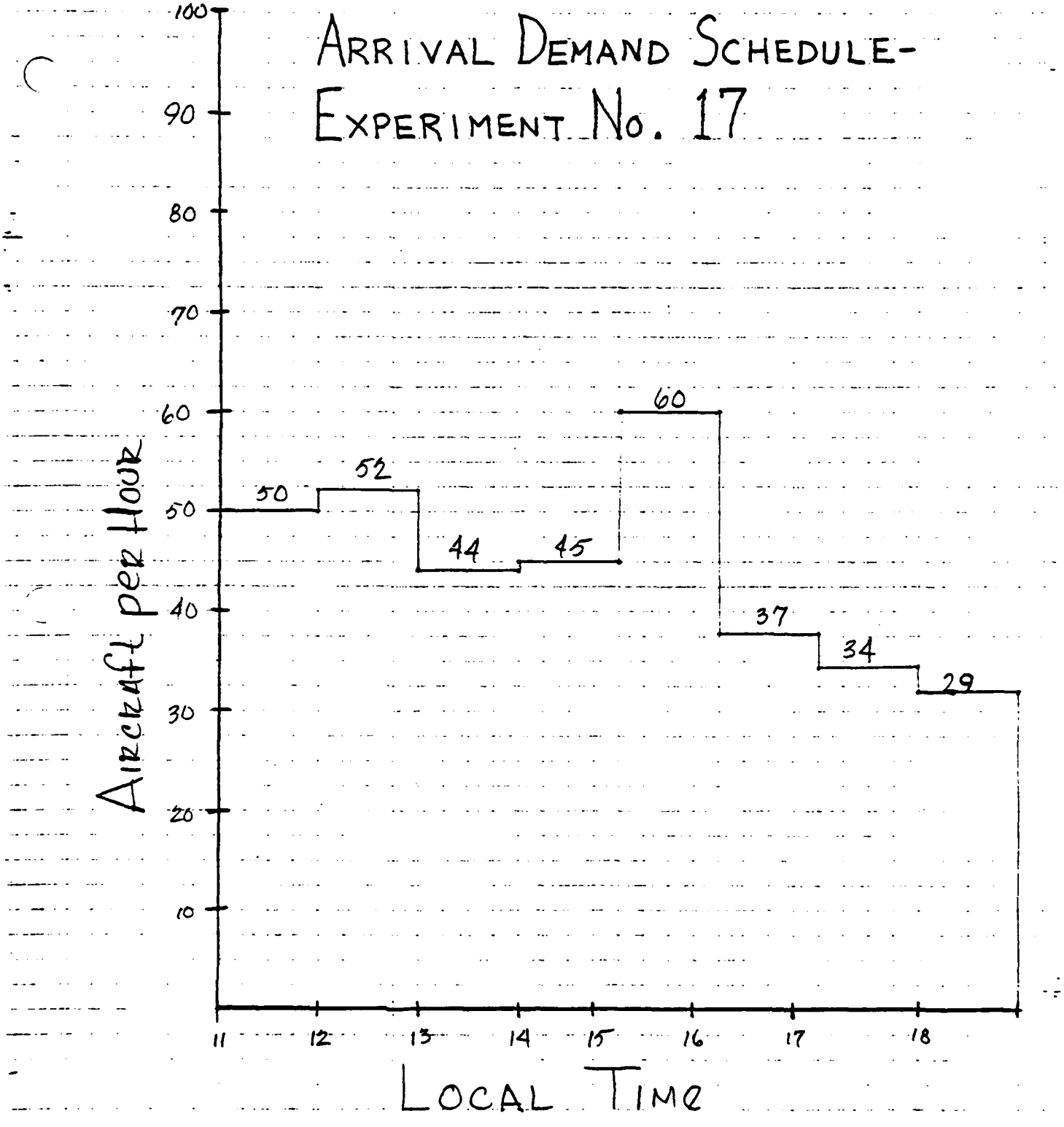


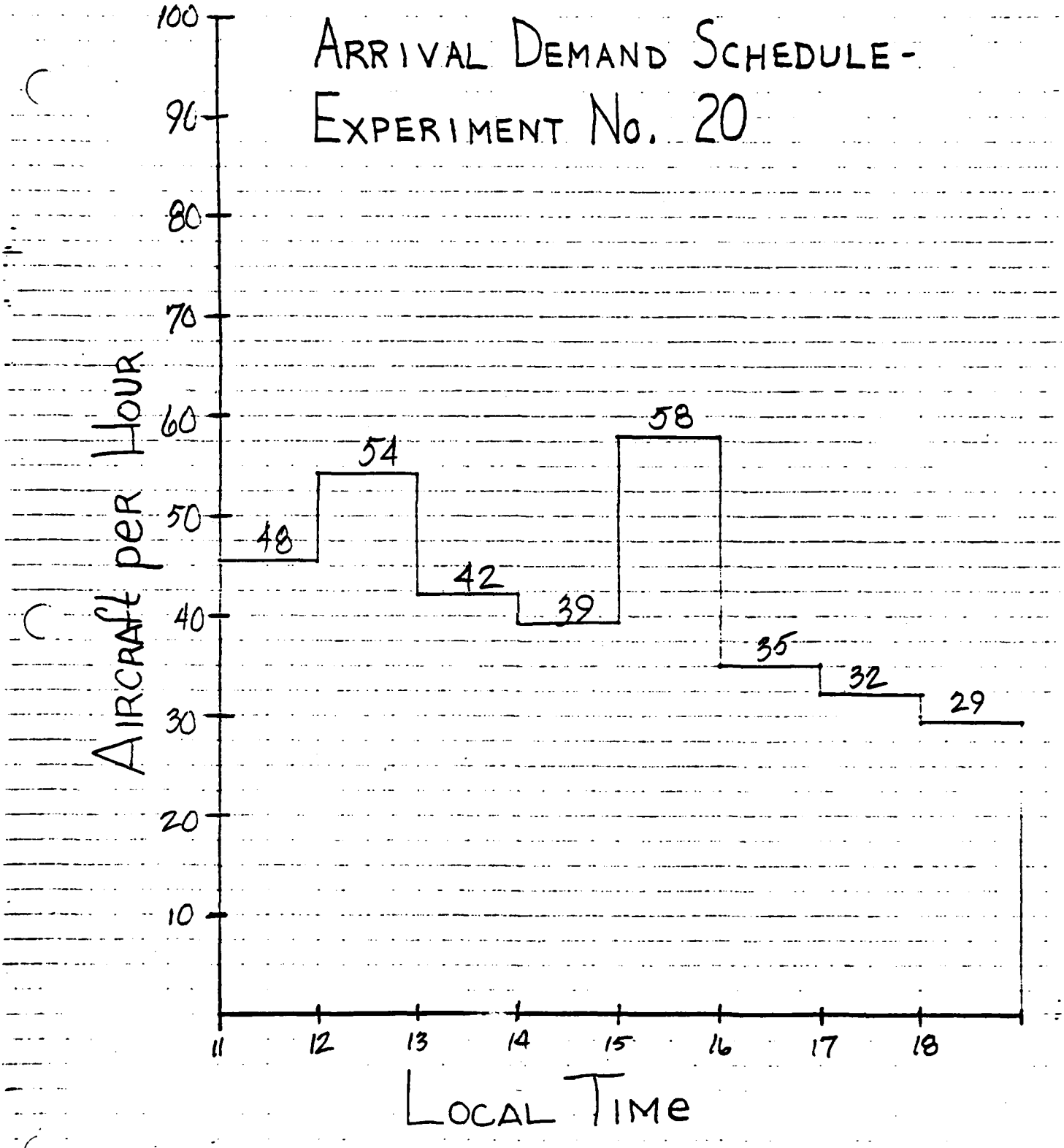
Arrival Demand Schedule-
Experiment No. 14



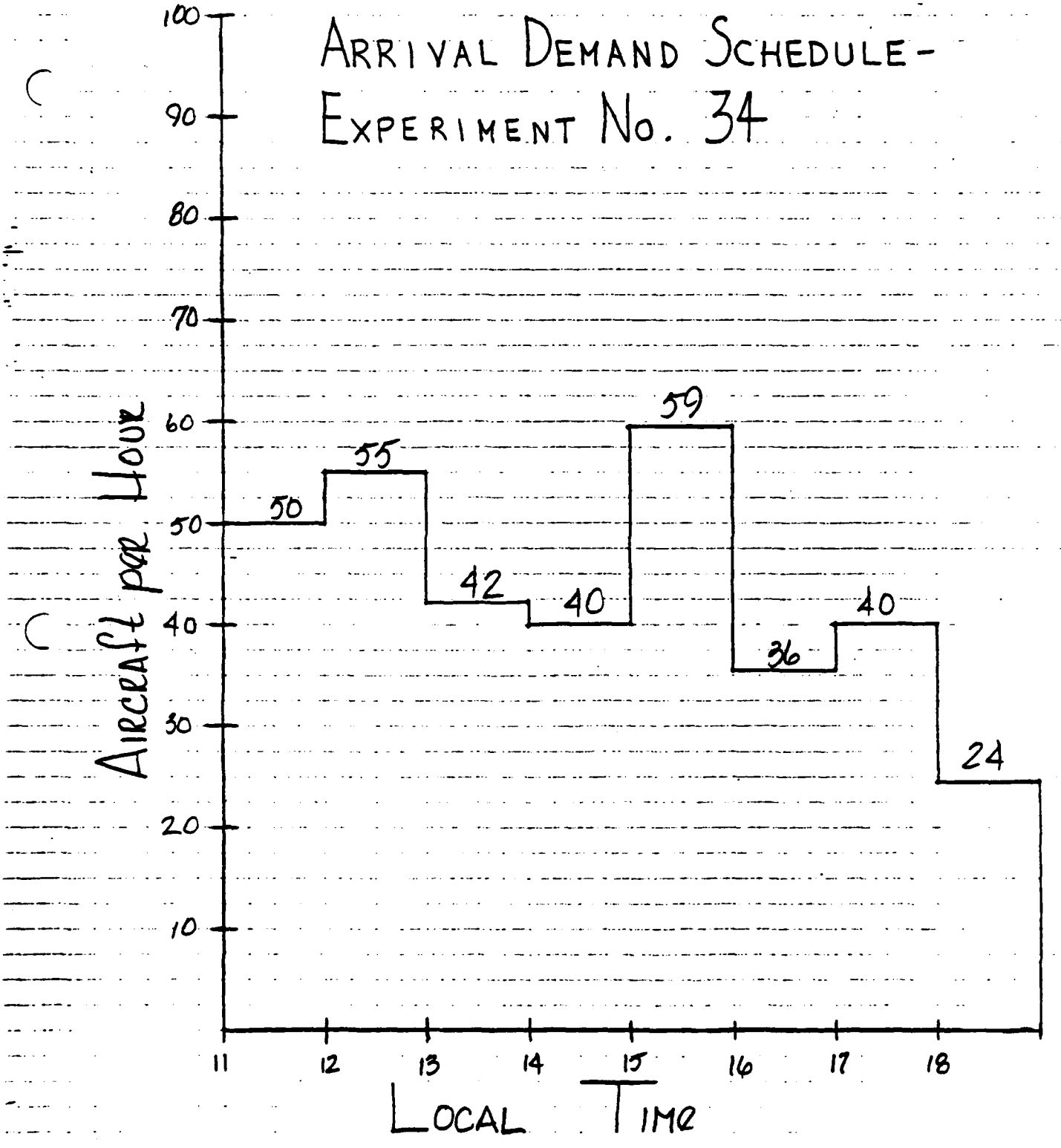
Arrival Demand Schedule-
Experiment Nos. 15, 39



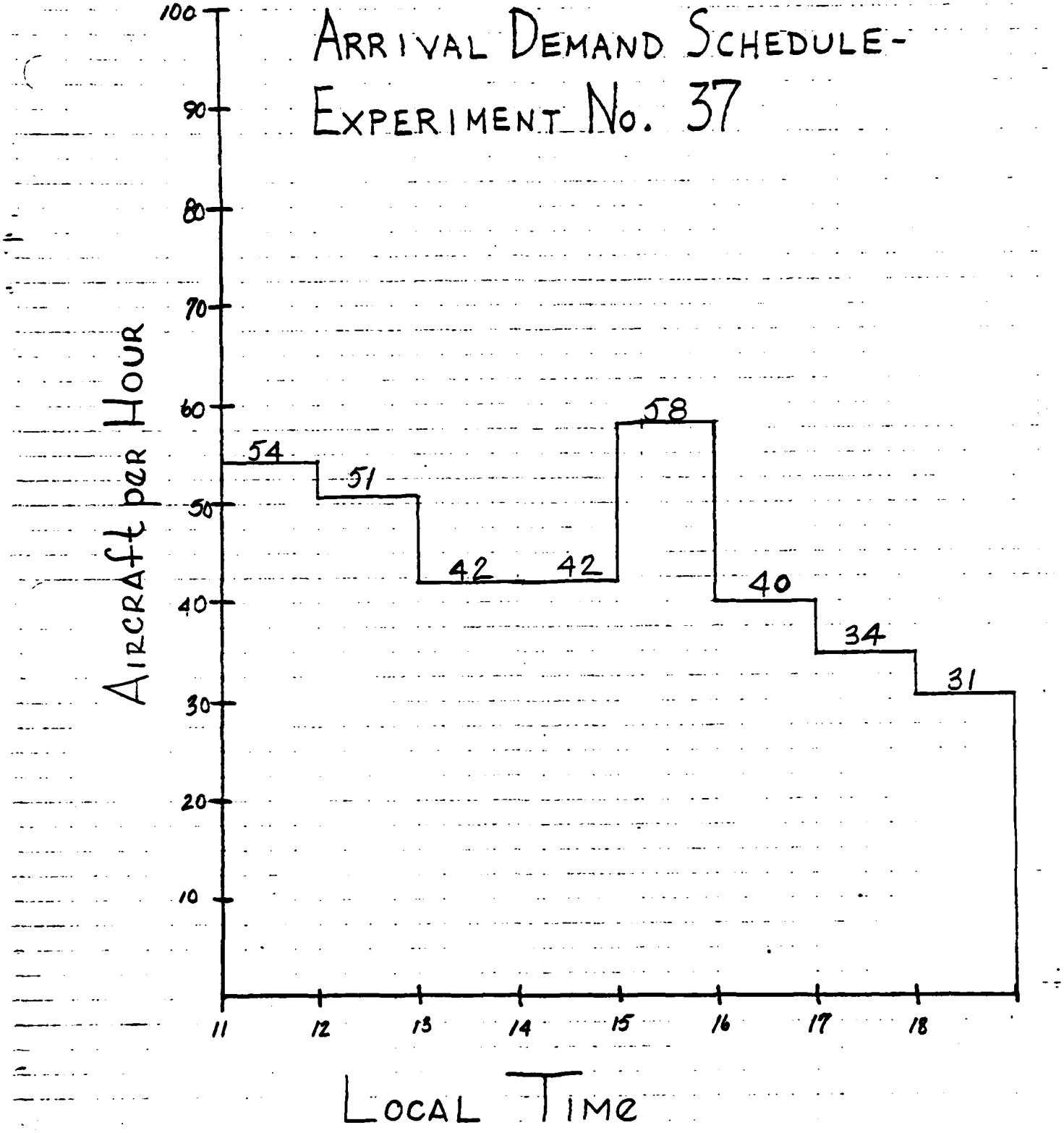

ARRIVAL DEMAND SCHEDULE-
EXPERIMENT No. 17
Aircraft per Hour
100
90
80
70
60
50
40
30
20
10
50
52
44
45
60
37
34
29
11
12
13
14
15
16
17
18
LOCAL TIME


ARRIVAL DEMAND SCHEDULE -
EXPERIMENT No. 20
AIRCRAFT PER HOUR
100
90
80
70
60
50
40
30
20
10
48
54
42
39
58
35
32
29
11
12
13
14
15
16
17
18
LOCAL TIME

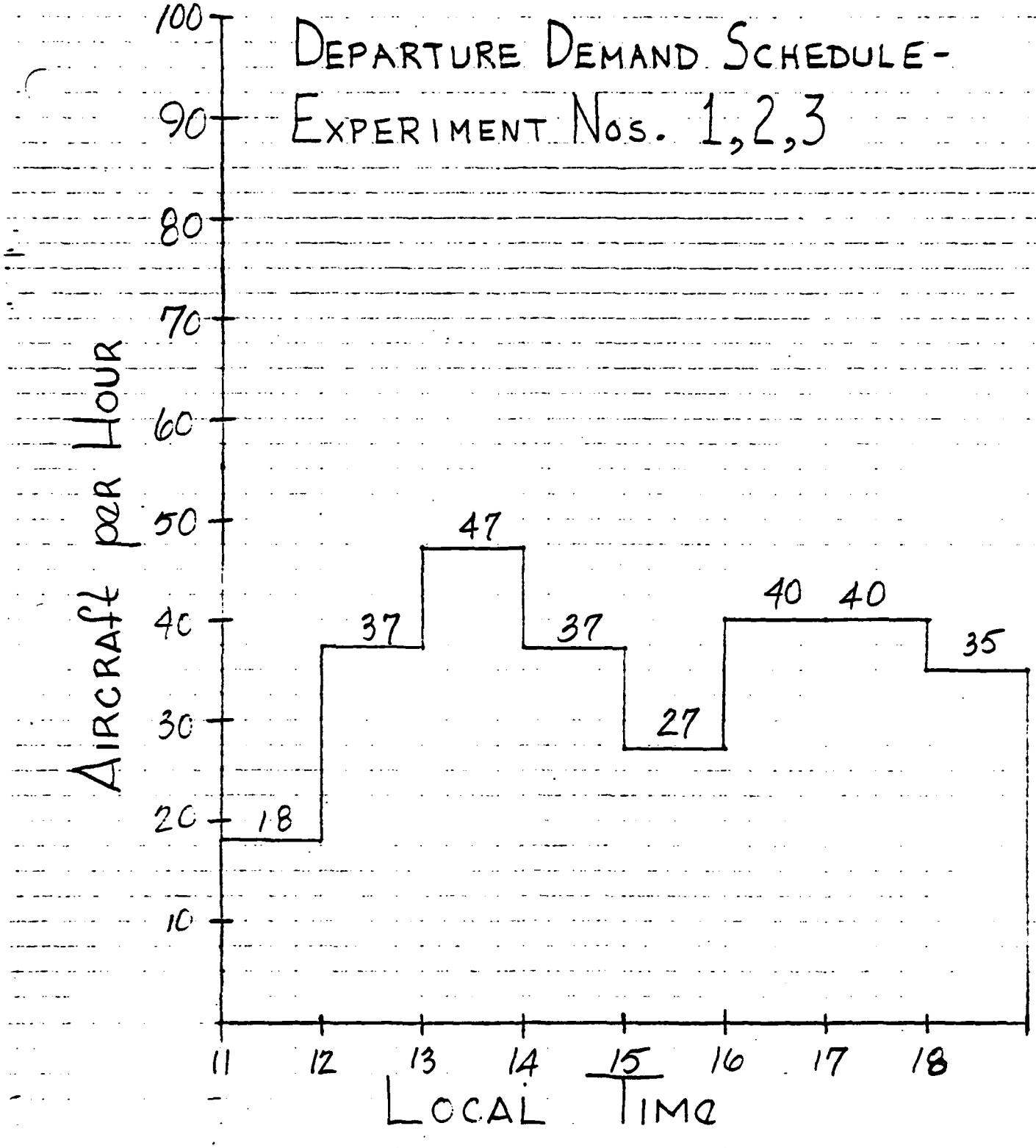
Arrival Demand Schedule - Experiment No. 34



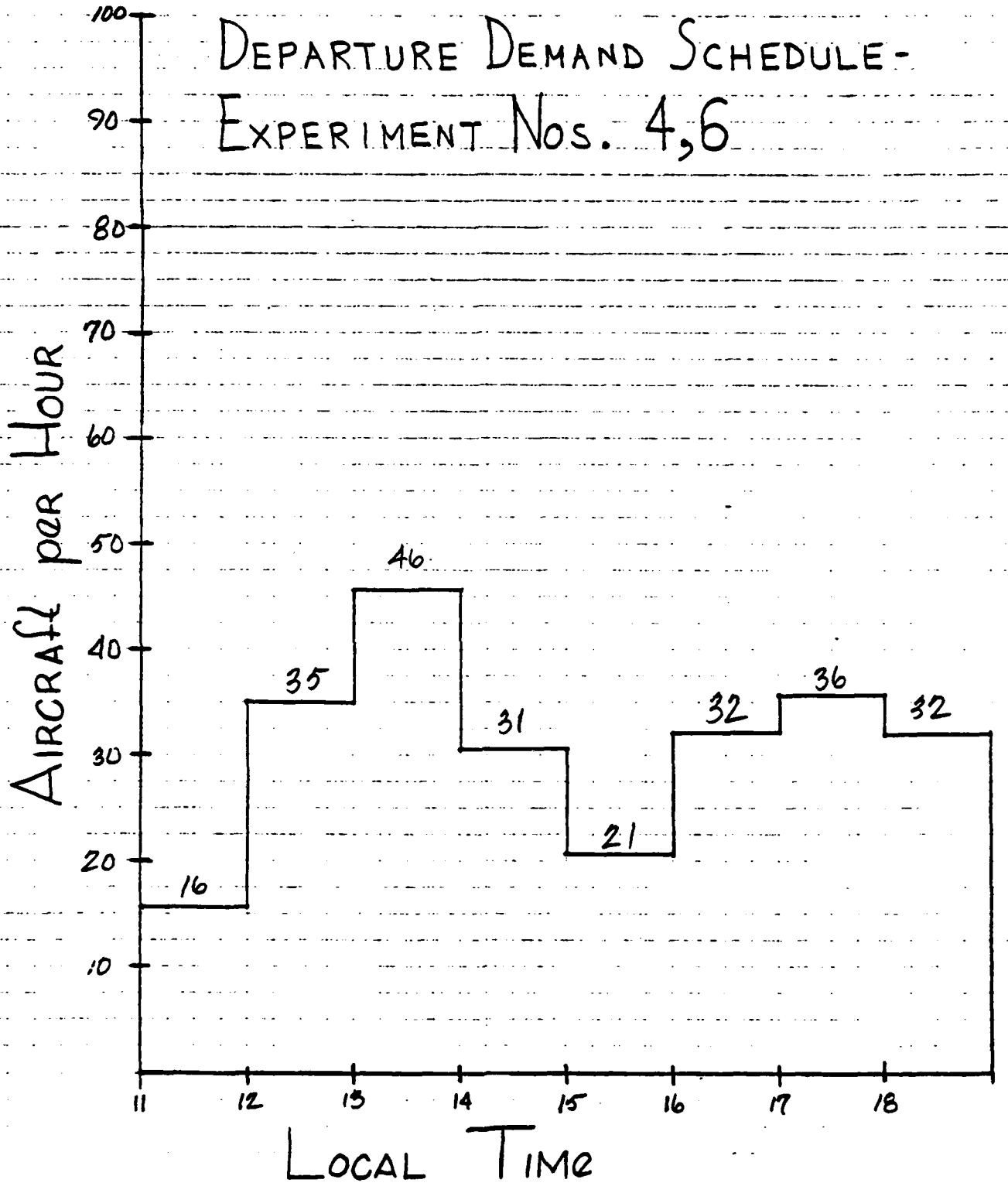
Arrival Demand Schedule-
Experiment No. 37



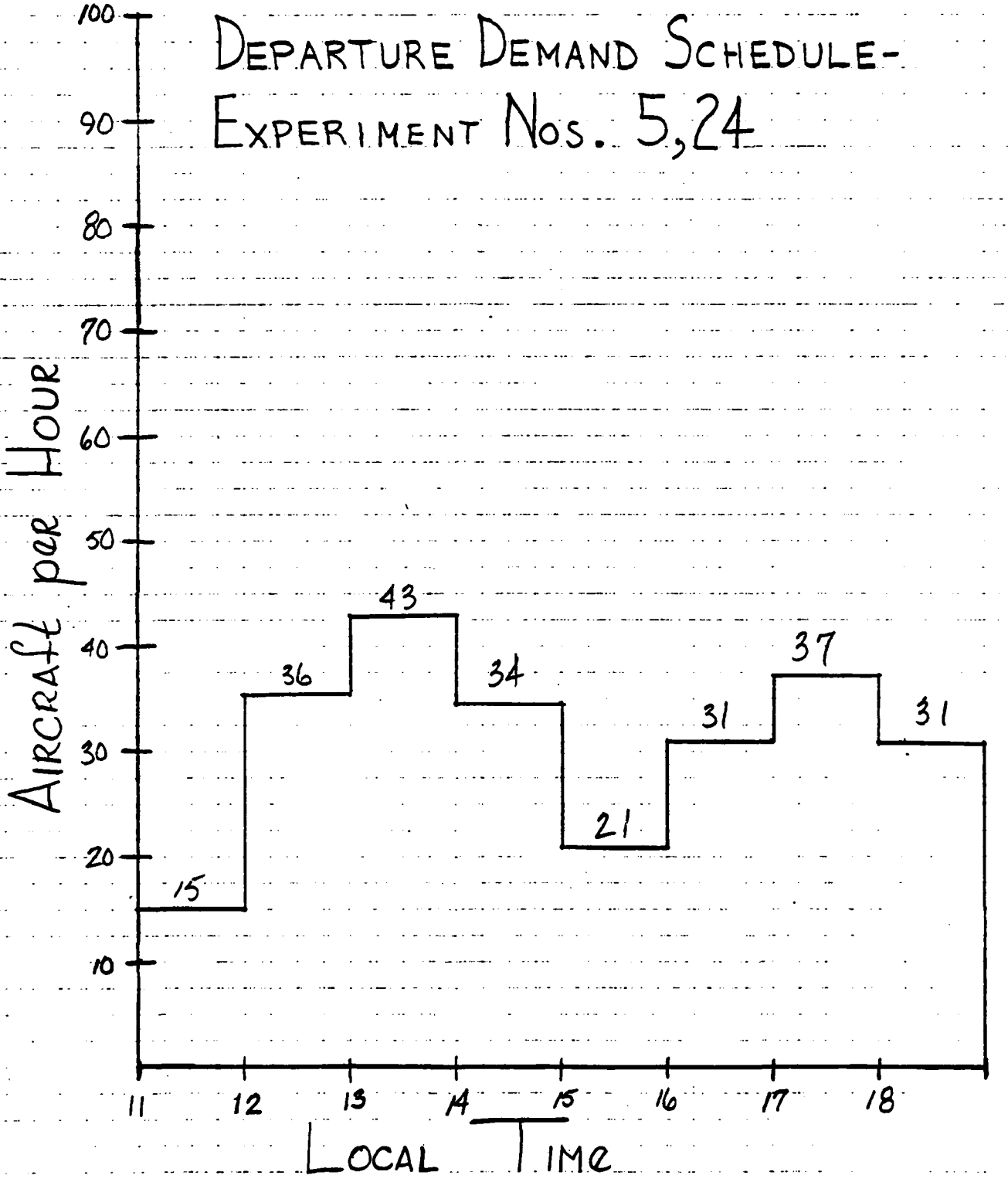
Departure Demand Schedule - Experiment Nos. 1, 2, 3



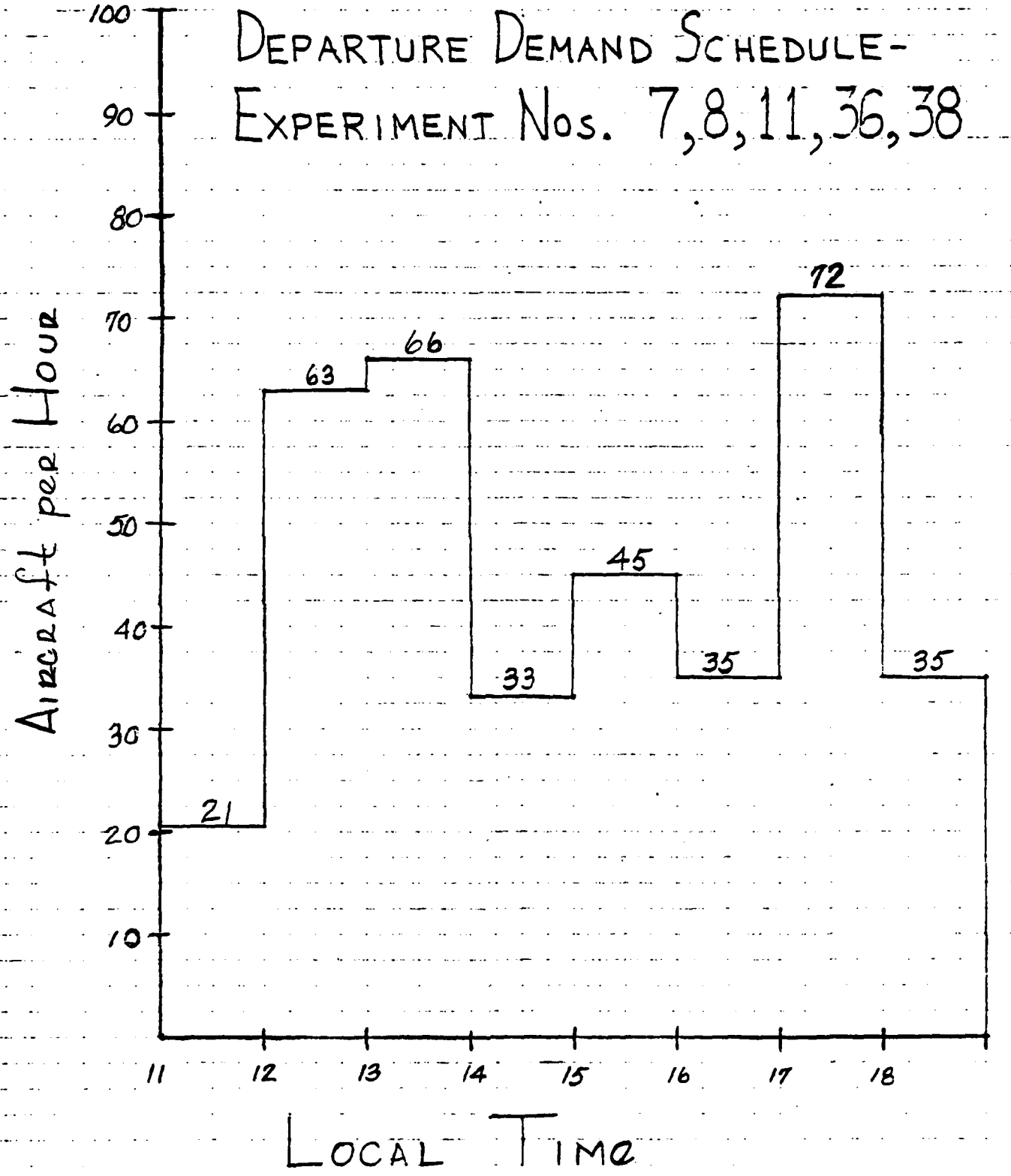
Departure Demand Schedule - Experiment Nos. 4,6



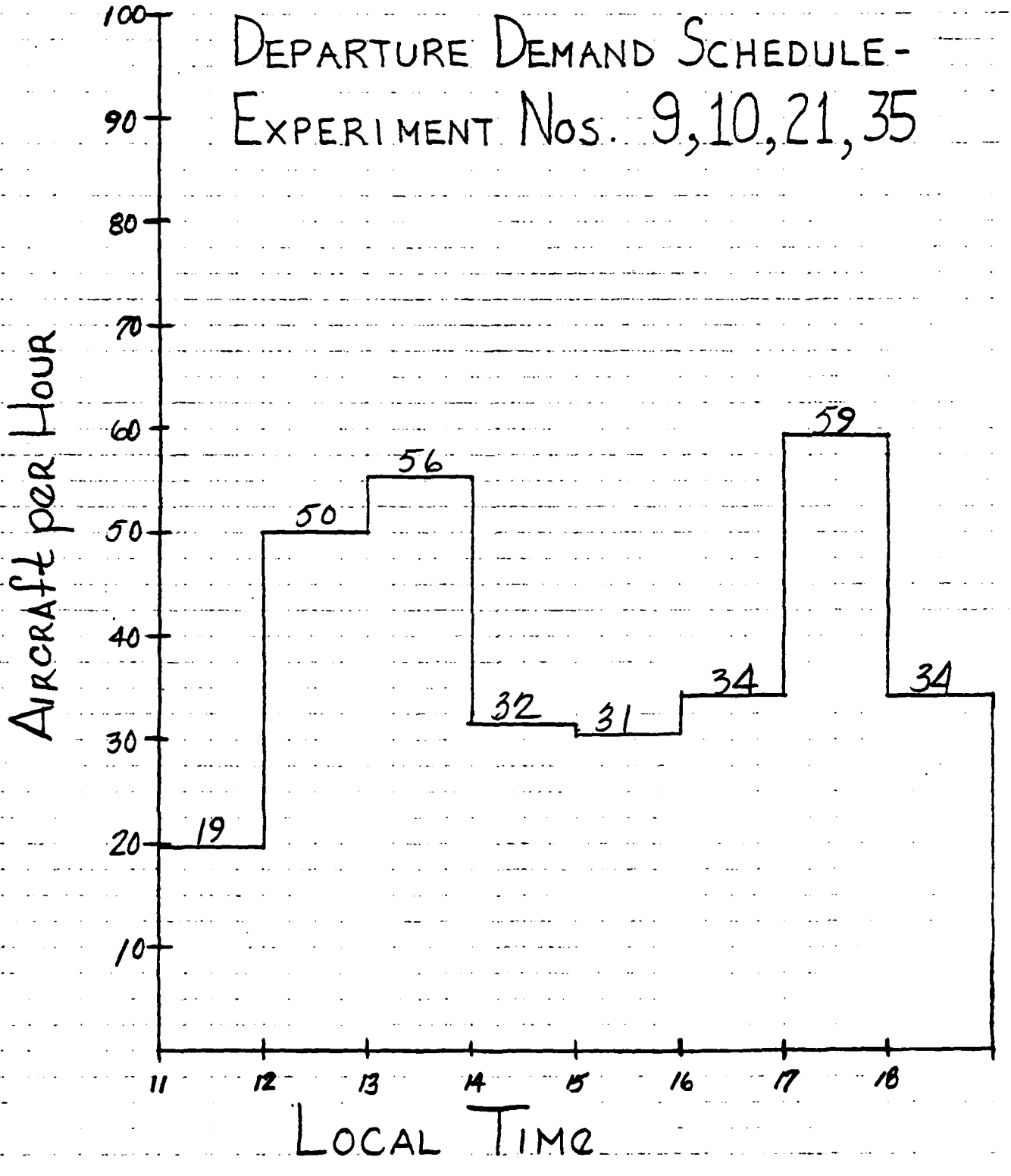
Departure Demand Schedule-
Experiment Nos. 5,24



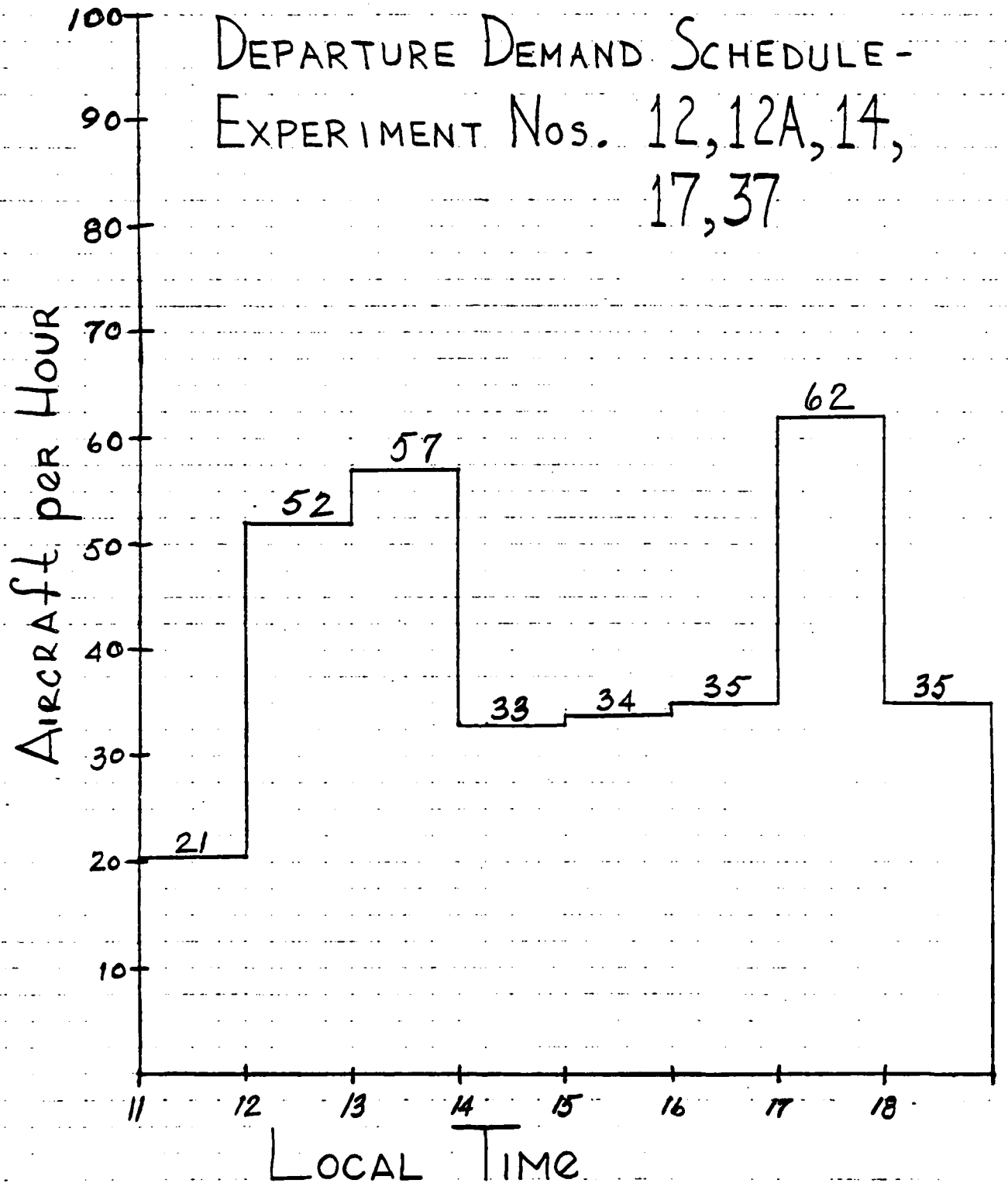
Departure Demand Schedule-
Experiment Nos. 7, 8, 11, 36, 38



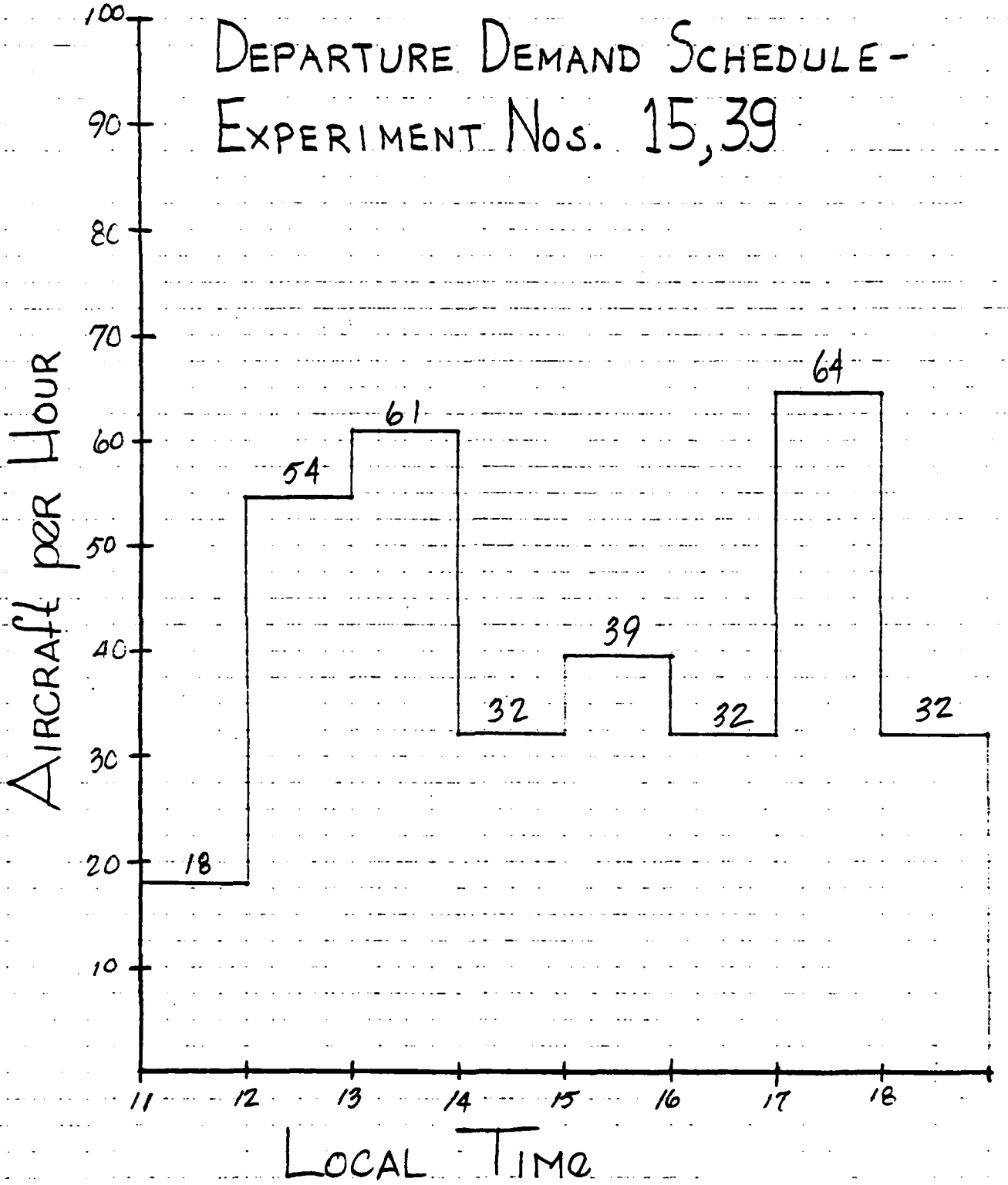
Departure Demand Schedule-
Experiment Nos. 9, 10, 21, 35



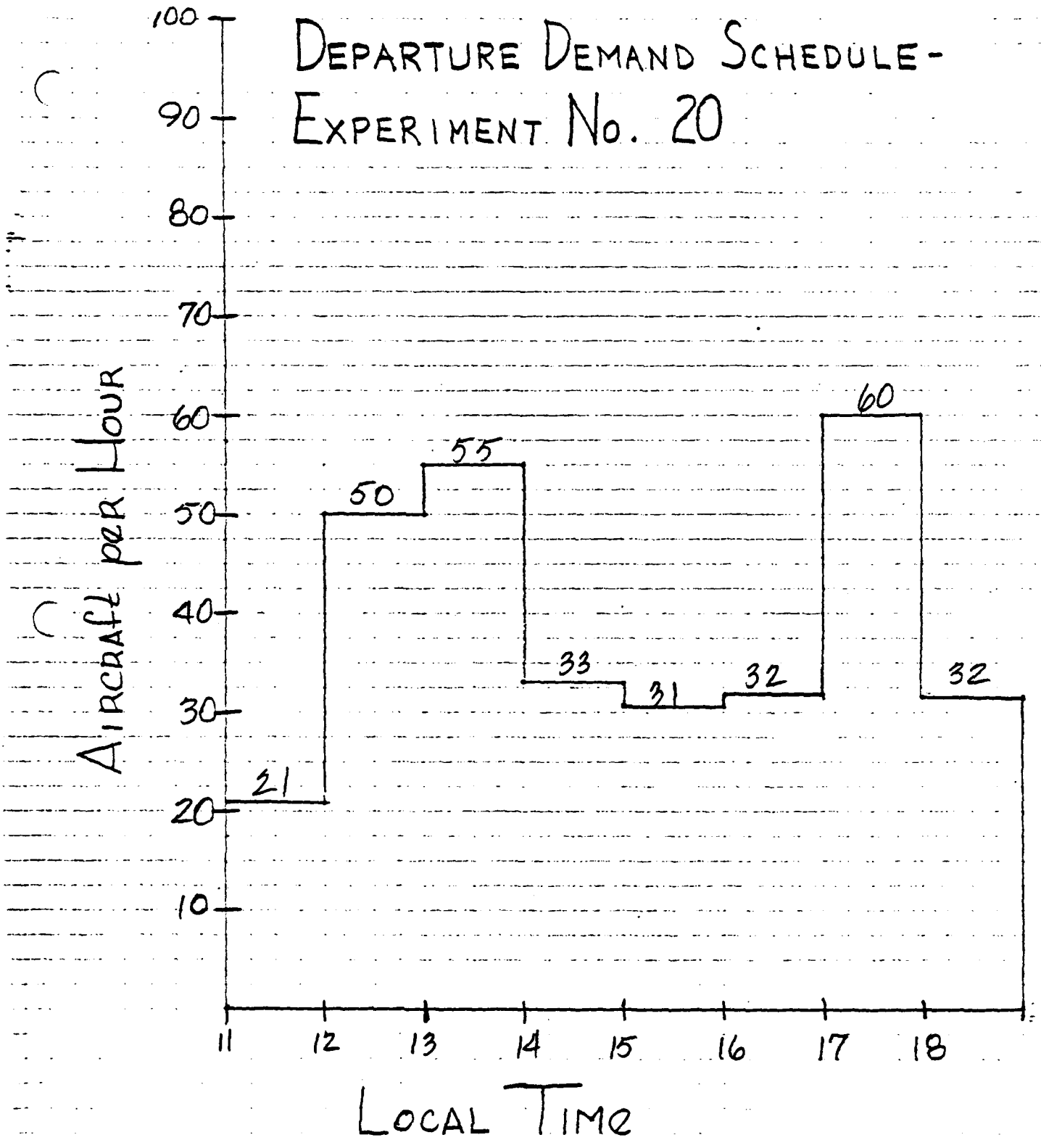
Departure Demand Schedule - Experiment Nos. 12, 12A, 14, 17, 37



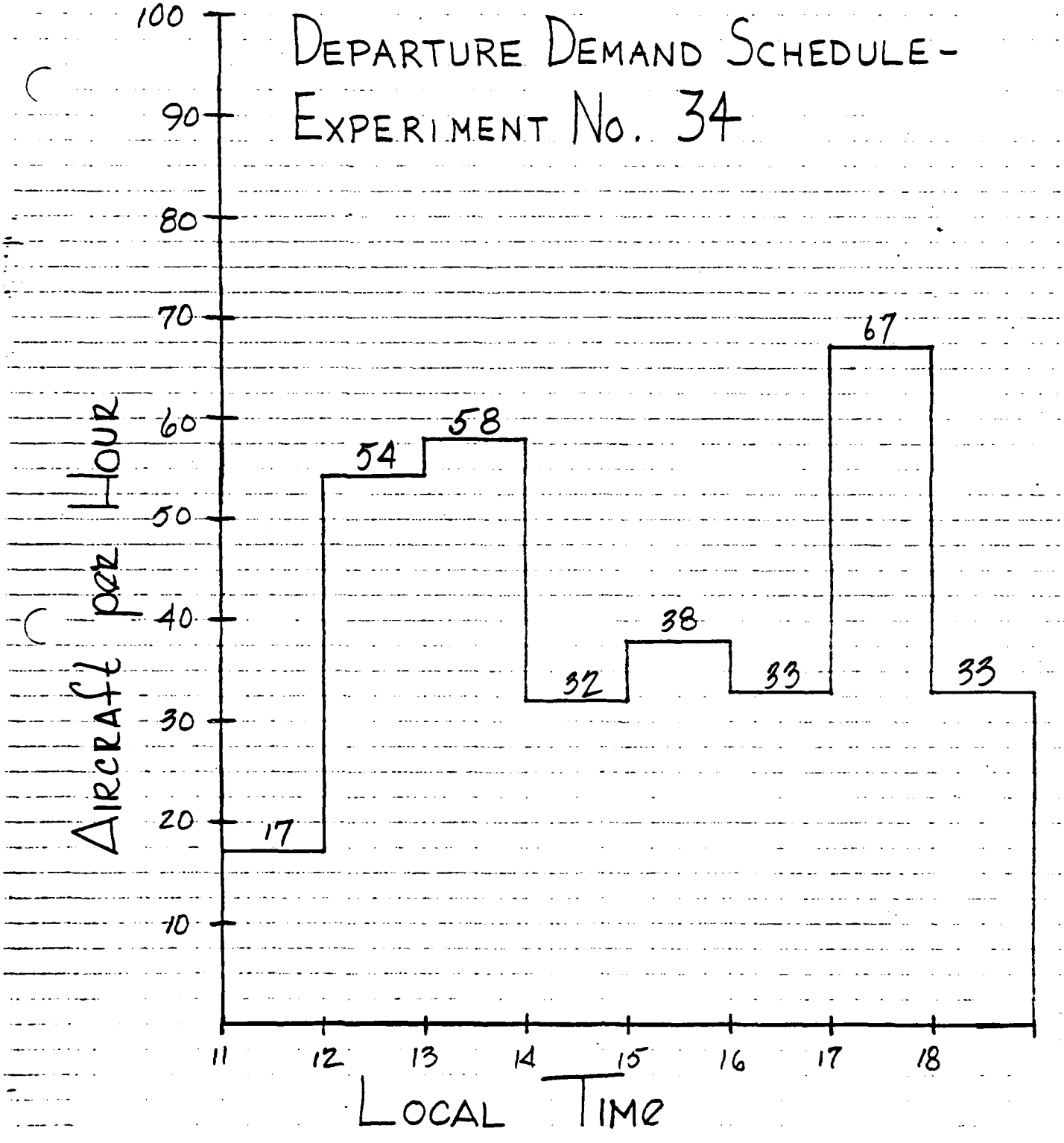
Departure Demand Schedule - Experiment Nos. 15, 39



Departure Demand Schedule - Experiment No. 20



Departure Demand Schedule - Experiment No. 34



Attachment D

AIRCRAFT MIX SUMMARY BY DEMAND AND WEATHER CONDITION

Miami International Airport

Miami
Airport Improvement Task Force Delay Studies

August 1979

The following table summarizes the aircraft mix across each experiment by demand and weather condition:

Demand	Weather	Exp. Nos.	%Class 1	%Class 2	%Class 3	%Class 4
1978	VFR	1, 2, 3	18	59	19	4
1978	IFR	4, 5, 6, 24	20	68	12	0
1983, full G.A.	VFR	7, 8, 11, 36, 38	32	50	14	4
1983, limited G.A.	VFR	12, 12A, 14, 17, 37	36	55	9	0
1983, full G.A.	IFR	15, 34, 39	36	56	8	0
1983, limited G.A.	IFR	9, 10, 20, 21, 35	37	58	5	0

Attachment E

CLASS AND RUNWAY DEMAND DISTRIBUTIONS FOR ARRIVALS AND DEPARTURES

Miami International Airport

Miami
Airport Improvement Task Force Delay Studies

August 1979

CLASS AND RUNWAY DEMAND DISTRIBUTION
FOR ARRIVALS AND DEPARTURES

EXPERIMENT NO. 1

RUNWAY NAME	9R	9L	12		TOTAL
	ARRIVALS				
CLASS 1	38	13	0		51
CLASS 2	90	81	4		175
CLASS 3	14	57	0		71
CLASS 4	0	16	0		16
TOTAL	142	167	4		313

	DEPARTURES				
CLASS 1	19	33	4		56
CLASS 2	80	85	24		189
CLASS 3	4	42	2		48
CLASS 4	1	7	1		9
TOTAL	104	167	31		302

ARRIVAL AND DEPARTURE TOTALS	246	334	35		615

CLASS AND RUNWAY DEMAND DISTRIBUTION
FOR ARRIVALS AND DEPARTURES

EXPERIMENT NO. 7, 11

RUNWAY NAME	9R	9L	12		TOTAL
	ARRIVALS				
CLASS 1	85	46	0		131
CLASS 2	102	86	5		193
CLASS 3	9	39	0		48
CLASS 4	0	23	0		23
TOTAL	196	194	5		395

	DEPARTURES				
CLASS 1	44	56	12		112
CLASS 2	82	83	25		190
CLASS 3	4	51	3		58
CLASS 4	0	10	0		10
TOTAL	130	200	40		370

ARRIVAL AND DEPARTURE TOTALS	326	394	45		765

CLASS AND RUNWAY DEMAND DISTRIBUTION
FOR ARRIVALS AND DEPARTURES

EXPERIMENT NO. 14

RUNWAY NAME	9R	9L	12		TOTAL
	ARRIVALS				
CLASS 1	86	45	0		131
CLASS 2	97	90	5		192
CLASS 3	5	26	0		31
CLASS 4	0	0	0		0
TOTAL	188	161	5		354

	DEPARTURES				
CLASS 1	44	55	13		112
CLASS 2	84	79	23		186
CLASS 3	3	27	1		31
CLASS 4	0	0	0		0
TOTAL	131	161	37		329

ARRIVAL AND DEPARTURE TOTALS	319	322	42		683

CLASS AND RUNWAY DEMAND DISTRIBUTION
FOR ARRIVALS AND DEPARTURES

EXPERIMENT NO. 4, 6

RUNWAY NAME	9R	9L	12		TOTAL
	ARRIVALS				
CLASS 1	38	14	0		52
CLASS 2	89	89	0		178
CLASS 3	6	32	0		38
CLASS 4	0	0	0		0
TOTAL	133	135	0		268

	DEPARTURES				
CLASS 1	19	33	4		56
CLASS 2	80	85	24		189
CLASS 3	3	21	1		25
CLASS 4	0	0	0		0
TOTAL	102	139	29		270

ARRIVAL AND DEPARTURE TOTALS	235	274	29		538

Runway closure during the IFR 2 time period in Experiment No. 6 is performed by the model.

CLASS AND RUNWAY DEMAND DISTRIBUTION
FOR ARRIVALS AND DEPARTURES

EXPERIMENT NO. 34

RUNWAY NAME	9R	9L	12		TOTAL
	ARRIVALS				
CLASS 1	85	46	0		131
CLASS 2	104	89	0		193
CLASS 3	7	16	0		23
CLASS 4	0	0	0		0
TOTAL	196	151	0		347

	DEPARTURES				
CLASS 1	44	56	12		112
CLASS 2	82	83	25		190
CLASS 3	2	27	1		30
CLASS 4	0	0	0		0
TOTAL	128	166	38		332

ARRIVAL AND DEPARTURE TOTALS	324	317	38		679

CLASS AND RUNWAY DEMAND DISTRIBUTION
FOR ARRIVALS AND DEPARTURES

EXPERIMENT NO. 9, 35, 10, 21

RUNWAY NAME	9R	9L	12		TOTAL
	ARRIVALS				
CLASS 1	86	45	0		131
CLASS 2	100	92	0		192
CLASS 3	3	11	0		14
CLASS 4	0	0	0		0
TOTAL	189	148	0		337

	DEPARTURES				
CLASS 1	44	55	13		112
CLASS 2	84	79	23		186
CLASS 3	1	15	1		17
CLASS 4	0	0	0		0
TOTAL	129	149	37		315

ARRIVAL AND DEPARTURE TOTALS	318	297	37		652

Runway closure during the IFR2 time period in Experiment No. 10 is performed by the model.

CLASS AND RUNWAY DEMAND DISTRIBUTION
FOR ARRIVALS AND DEPARTURES

EXPERIMENT NO. 2

RUNWAY NAME	27R	27L	30		TOTAL
	ARRIVALS				
CLASS 1	15	8	28		51
CLASS 2	77	15	86		178
CLASS 3	55	1	15		71
CLASS 4	15	0	1		16
TOTAL	162	24	130		316

	DEPARTURES				
CLASS 1	28	28	0		56
CLASS 2	94	95	0		189
CLASS 3	38	10	0		48
CLASS 4	9	0	0		9
TOTAL	169	133	0		302

ARRIVAL AND DEPARTURE TOTALS	331	157	130		618

CLASS AND RUNWAY DEMAND DISTRIBUTION
FOR ARRIVALS AND DEPARTURES

EXPERIMENT NO. 8, 36

RUNWAY NAME	27R	27L	30		TOTAL
	ARRIVALS				
CLASS 1	51	14	66		131
CLASS 2	83	17	93		193
CLASS 3	37	0	11		48
CLASS 4	21	0	2		23
TOTAL	192	31	172		395

	DEPARTURES				
CLASS 1	58	54	0		112
CLASS 2	83	104	3		190
CLASS 3	45	13	0		58
CLASS 4	9	1	0		10
TOTAL	195	172	3		370

ARRIVAL AND DEPARTURE TOTALS	387	203	175		765

CLASS AND RUNWAY DEMAND DISTRIBUTION
FOR ARRIVALS AND DEPARTURES

EXPERIMENT NO. 37

RUNWAY NAME	27R	27L	30		TOTAL
	ARRIVALS				
CLASS 1	61	14	56		131
CLASS 2	81	16	95		192
CLASS 3	24	0	7		31
CLASS 4	0	0	0		0
TOTAL	166	30	158		354

	DEPARTURES				
CLASS 1	54	58	0		112
CLASS 2	87	97	2		186
CLASS 3	26	5	0		31
CLASS 4	0	0	0		0
TOTAL	167	160	2		329

ARRIVAL AND DEPARTURE TOTALS	333	190	160		683

CLASS AND RUNWAY DEMAND DISTRIBUTION
FOR ARRIVALS AND DEPARTURES

EXPERIMENT NO. 3

RUNWAY NAME	27R	27L	30		TOTAL
	ARRIVALS				
CLASS 1	25	26	0		51
CLASS 2	99	79	0		178
CLASS 3	62	9	0		71
CLASS 4	16	0	0		16
TOTAL	202	114	0		316

	DEPARTURES				
CLASS 1	28	28	0		56
CLASS 2	94	95	0		189
CLASS 3	38	10	0		48
CLASS 4	9	0	0		9
TOTAL	169	133	0		302

ARRIVAL AND DEPARTURE TOTALS	371	247	0		618

CLASS AND RUNWAY DEMAND DISTRIBUTION
FOR ARRIVALS AND DEPARTURES

EXPERIMENT NO. 38

RUNWAY NAME	27R	27L	30		TOTAL
	ARRIVALS				
CLASS 1	68	63	0		131
CLASS 2	108	85	0		193
CLASS 3	41	7	0		48
CLASS 4	23	0	0		23
TOTAL	240	155	0		395

	DEPARTURES				
CLASS 1	58	54	0		112
CLASS 2	83	104	3		190
CLASS 3	46	12	0		58
CLASS 4	9	1	0		10
TOTAL	196	171	3		370

ARRIVAL AND DEPARTURE TOTALS	436	326	3		765

CLASS AND RUNWAY DEMAND DISTRIBUTION
FOR ARRIVALS AND DEPARTURES

EXPERIMENT NO. 17

RUNWAY NAME					TOTAL
	ARRIVALS				
CLASS 1	76	55	0		131
CLASS 2	109	83	0		192
CLASS 3	27	4	0		31
CLASS 4	0	0	0		0
TOTAL	212	142	0		354

	DEPARTURES				
CLASS 1	54	58	0		112
CLASS 2	87	97	2		186
CLASS 3	26	5	0		31
CLASS 4	0	0	0		0
TOTAL	167	160	2		329

ARRIVAL AND DEPARTURE TOTALS	379	302	2		683

CLASS AND RUNWAY DEMAND DISTRIBUTION
FOR ARRIVALS AND DEPARTURES

EXPERIMENT NO. 12, 12A

RUNWAY NAME	27R	27L	30		TOTAL
	ARRIVALS				
CLASS 1	60	0	71		131
CLASS 2	81	0	111		192
CLASS 3	24	0	7		31
CLASS 4	0	0	0		0
TOTAL	165	0	189		354

	DEPARTURES				
CLASS 1	54	58	0		112
CLASS 2	87	99	0		186
CLASS 3	26	5	0		31
CLASS 4	0	0	0		0
TOTAL	167	162	0		329

ARRIVAL AND DEPARTURE TOTALS	332	162	189		683

CLASS AND RUNWAY DEMAND DISTRIBUTION
FOR ARRIVALS AND DEPARTURES

EXPERIMENT NO. 5, 24

RUNWAY NAME	27R	27L	30		TOTAL
	ARRIVALS				
CLASS 1	25	26	0		51
CLASS 2	97	78	0		175
CLASS 3	33	5	0		38
CLASS 4	0	0	0		0
TOTAL	155	109	0		264

	DEPARTURES				
CLASS 1	28	28	0		56
CLASS 2	94	95	0		189
CLASS 3	22	2	0		24
CLASS 4	0	0	0		0
TOTAL	144	125	0		269

ARRIVAL AND DEPARTURE TOTALS	299	234	0		533

CLASS AND RUNWAY DEMAND DISTRIBUTION
FOR ARRIVALS AND DEPARTURES

EXPERIMENT NO. 15.39

RUNWAY NAME	27R	27L	30		TOTAL
	ARRIVALS				
CLASS 1	68	63	0		131
CLASS 2	108	85	0		193
CLASS 3	21	2	0		23
CLASS 4	0	0	0		0
TOTAL	197	150			347

	DEPARTURES				
CLASS 1	58	54	0		112
CLASS 2	83	107	0		190
CLASS 3	24	6	0		30
CLASS 4	0	0	0		0
TOTAL	165	167	0		332

ARRIVAL AND DEPARTURE TOTALS	362	317	0		679

CLASS AND RUNWAY DEMAND DISTRIBUTION
FOR ARRIVALS AND DEPARTURES

EXPERIMENT NO. 20

RUNWAY NAME	27R	27L	30		TOTAL
	ARRIVALS				
CLASS 1	76	55	0		131
CLASS 2	109	83	0		192
CLASS 3	12	3	0		15
CLASS 4	0	0	0		0
TOTAL	197	141	0		338

	DEPARTURES				
CLASS 1	54	58	0		112
CLASS 2	87	99	0		186
CLASS 3	12	4	0		16
CLASS 4	0	0	0		0
TOTAL	153	161	0		314

ARRIVAL AND DEPARTURE TOTALS	350	302	0		652

Attachment F

SUMMARY OF VFR BASELINE TRAFFIC SCHEDULES BY AIRLINE GROUP, ARRIVAL/DEPARTURE COUNT, WEIGHT CLASS AND TIME

Miami International Airport

Miami
Airport Improvement Task Force Delay Studies
August 1979

SECTION 1

1978 VFR BASELINE

C1-	33	(15/A,	18/D)
C2-	15	(8/A,	7/D)
DD-	15	(7/A,	8/D)
EA-	118	(53/A,	65/D)
F1-	4	(3/A,	1/D)
F2-	1	(0/A,	1/D)
F3-	5	(3/A,	2/D)
FF-	44	(22/A,	22/D)
GA-	184	(110/A,	74/D)
GG-	58	(27/A,	31/D)
HH-	55	(26/A,	29/D)
IA-	103	(54/A,	49/D)
TOTALS-	635	(328/A,	307/D)

AIRLINE	CLASS 1	CLASS 2	CLASS 3	CLASS 4
C1	0	29	4	0
C2	0	15	0	0
DD	2	13	0	0
EA	34	84	0	0
F1	0	4	0	0
F2	0	1	0	0
F3	5	0	0	0
FF	14	30	0	0
GA	0	36	120	28
GG	14	44	0	0
HH	14	41	0	0
IA	26	77	0	0

HOUR	ARRIVALS	DEPARTURES
0	0	0
1	0	0
2	0	0
3	0	0
4	0	0
5	0	0
6	0	0
7	0	0
8	0	0
9	0	0
10	13	5
11	47	18
12	46	37
13	36	47
14	41	37
15	41	27
16	48	40
17	27	40
18	29	35
19	0	9
20	0	4
21	0	3
22	0	3
23	0	2

1978 AIR CARRIER/G.A. BASELINE

HOUR	CLASS 1	CLASS 2	CLASS 3	CLASS 4
0	0	0	0	0
1	0	0	0	0
2	0	0	0	0
3	0	0	0	0
4	0	0	0	0
5	0	0	0	0
6	0	0	0	0
7	0	0	0	0
8	0	0	0	0
9	0	0	0	0
10	2	8	5	3
11	11	40	13	1
12	15	59	8	1
13	16	48	17	2
14	13	43	19	3
15	8	37	18	5
16	16	44	19	9
17	15	38	11	3
18	7	42	14	1
19	2	7	0	0
20	1	3	0	0
21	1	2	0	0
22	1	2	0	0
23	1	1	0	0

*

1978 AIR CARRIER/G.A. BASELINE

C1-	33	(15/A,	18/D)
C2-	15	(8/A,	7/D)
DD-	15	(7/A,	8/D)
EA-	118	(53/A,	65/D)
F1-	4	(3/A,	1/D)
F2-	1	(0/A,	1/D)
F3-	5	(3/A,	2/D)
FF-	44	(22/A,	22/D)
GG-	58	(27/A,	31/D)
HH-	55	(26/A,	29/D)
IA-	103	(54/A,	49/D)
TOTALS-	451	(218/A,	233/D)

AIRLINE	CLASS 1	CLASS 2	CLASS 3	CLASS 4
C1	0	29	4	0
C2	0	15	0	0
DD	2	13	0	0
EA	34	84	0	0
F1	0	4	0	0
F2	0	1	0	0
F3	5	0	0	0
FF	14	30	0	0
GG	14	44	0	0
HH	14	41	0	0
IA	26	77	0	0

HOUR	ARRIVALS	DEPARTURES
0	0	0
1	0	0
2	0	0
3	0	0
4	0	0
5	0	0
6	0	0
7	0	0
8	0	0
9	0	0
10	8	2
11	35	12
12	40	31
13	18	42
14	25	24
15	27	16
16	32	24
17	17	34
18	16	27
19	0	9
20	0	4
21	0	3
22	0	3
23	0	2

HOUR	CLASS 1	CLASS 2	CLASS 3	CLASS 4
0	0	0	0	0
1	0	0	0	0
2	0	0	0	0
3	0	0	0	0
4	0	0	0	0
5	0	0	0	0
6	0	0	0	0
7	0	0	0	0
8	0	0	0	0
9	0	0	0	0
10	2	8	0	0
11	11	36	0	0
12	15	55	1	0
13	16	43	1	0
14	13	36	0	0
15	8	35	0	0
16	16	39	1	0
17	15	35	1	0
18	7	36	0	0
19	2	7	0	0
20	1	3	0	0
21	1	2	0	0
22	1	2	0	0
23	1	1	0	0

*

1978 AIR CARRIER COMPONENT

GA- 184 (110/A, 74/D)

TOTALS- 184 (110/A, 74/D)

AIRLINE	CLASS 1	CLASS 2	CLASS 3	CLASS 4
GA	0	36	120	28

HOUR	ARRIVALS	DEPARTURES
0	0	0
1	0	0
2	0	0
3	0	0
4	0	0
5	0	0
6	0	0
7	0	0
8	0	0
9	0	0
10	5	3
11	12	6
12	6	6
13	18	5
14	16	13
15	14	11
16	16	16
17	10	6
18	13	8
19	0	0
20	0	0
21	0	0
22	0	0
23	0	0

1978 G.A. COMPONENT

HOUR	CLASS 1	CLASS 2	CLASS 3	CLASS 4
0	0	0	0	0
1	0	0	0	0
2	0	0	0	0
3	0	0	0	0
4	0	0	0	0
5	0	0	0	0
6	0	0	0	0
7	0	0	0	0
8	0	0	0	0
9	0	0	0	0
10	0	0	5	3
11	0	4	13	1
12	0	4	7	1
13	0	5	16	2
14	0	7	19	3
15	0	2	18	5
16	0	5	18	9
17	0	3	10	3
18	0	6	14	1
19	0	0	0	0
20	0	0	0	0
21	0	0	0	0
22	0	0	0	0
23	0	0	0	0

*

1978 G.A. COMPONENT

SECTION 2

1983 VFR, FULL G.A. BASELINE

C1-	59	(31/A,	28/D)
C2-	25	(12/A,	13/D)
DL-	29	(14/A,	15/D)
EA-	128	(62/A,	66/D)
F1-	5	(4/A,	1/D)
F3-	8	(7/A,	1/D)
F4-	42	(26/A,	16/D)
FF-	57	(27/A,	30/D)
GA-	164	(82/A,	82/D)
GG-	73	(37/A,	36/D)
HH-	61	(31/A,	30/D)
IA-	114	(62/A,	52/D)
TOTALS-	765	(395/A,	370/D)

AIRLINE	CLASS 1	CLASS 2	CLASS 3	CLASS 4
C1	0	59	0	0
C2	0	25	0	0
DD	13	16	0	0
EA	65	63	0	0
F1	2	3	0	0
F3	8	0	0	0
F4	20	22	0	0
FF	33	24	0	0
GA	0	25	106	33
GG	29	44	0	0
HH	27	34	0	0
IA	46	68	0	0

HOUR	ARRIVALS	DEPARTURES
0	0	0
1	0	0
2	0	0
3	0	0
4	0	0
5	0	0
6	0	0
7	0	0
8	0	0
9	0	0
10	0	0
11	48	21
12	63	63
13	52	66
14	42	33
15	71	45
16	41	35
17	47	72
18	31	35
19	0	0
20	0	0
21	0	0
22	0	0

1983 FULL G.A. : AIR CARRIER/G.A. BASELINE

HOUR	CLASS 1	CLASS 2	CLASS 3	CLASS 4
0	0	0	0	0
1	0	0	0	0
2	0	0	0	0
3	0	0	0	0
4	0	0	0	0
5	0	0	0	0
6	0	0	0	0
7	0	0	0	0
8	0	0	0	0
9	0	0	0	0
10	0	0	0	0
11	18	43	6	2
12	35	63	21	7
13	35	58	18	7
14	24	46	3	2
15	41	48	24	3
16	29	39	4	4
17	43	48	23	5
18	18	38	7	3
19	0	0	0	0
20	0	0	0	0
21	0	0	0	0
22	0	0	0	0
23	0	0	0	0

*

1983 FULL G.A. : AIR CARRIER/G.A. BASELINE

C1-	59	(31/A,	28/D)
C2-	25	(12/A,	13/D)
DD-	29	(14/A,	15/D)
EA-	128	(62/A,	66/D)
F1-	5	(4/A,	1/D)
F3-	8	(7/A,	1/D)
F4-	42	(26/A,	16/D)
FF-	57	(27/A,	30/D)
GG-	73	(37/A,	36/D)
HH-	61	(31/A,	30/D)
IA-	114	(62/A,	52/D)
TOTALS-	601	(313/A,	288/D)

AIRLINE	CLASS 1	CLASS 2	CLASS 3	CLASS 4
C1	0	59	0	0
C2	0	25	0	0
DD	13	16	0	0
EA	65	63	0	0
F1	2	3	0	0
F3	8	0	0	0
F4	20	22	0	0
FF	33	24	0	0
GG	29	44	0	0
HH	27	34	0	0
IA	46	68	0	0

HOUR	ARRIVALS	DEPARTURES
0	0	0
1	0	0
2	0	0
3	0	0
4	0	0
5	0	0
6	0	0
7	0	0
8	0	0
9	0	0
10	0	0
11	44	15
12	47	48
13	37	50
14	37	30
15	55	28
16	37	30
17	30	57
18	26	30
19	0	0
20	0	0
21	0	0
22	0	0
23	0	0

1983 FULL G.A. : AIR CARRIER COMPONENT

HOUR	CLASS 1	CLASS 2	CLASS 3	CLASS 4
0	0	0	0	0
1	0	0	0	0
2	0	0	0	0
3	0	0	0	0
4	0	0	0	0
5	0	0	0	0
6	0	0	0	0
7	0	0	0	0
8	0	0	0	0
9	0	0	0	0
10	0	0	0	0
11	18	41	0	0
12	35	60	0	0
13	35	52	0	0
14	24	43	0	0
15	41	42	0	0
16	29	38	0	0
17	43	44	0	0
18	18	38	0	0
19	0	0	0	0
20	0	0	0	0
21	0	0	0	0
22	0	0	0	0
23	0	0	0	0

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1983 FULL G.A. : AIR CARRIER COMPONENT

GA- 164 (82/A, 82/D)

TOTALS- 164 (82/A, 82/D)

AIRLINE	CLASS 1	CLASS 2	CLASS 3	CLASS 4
GA	0	25	106	33

HOUR	ARRIVALS	DEPARTURES
0	0	0
1	0	0
2	0	0
3	0	0
4	0	0
5	0	0
6	0	0
7	0	0
8	0	0
9	0	0
10	0	0
11	4	6
12	16	15
13	15	16
14	5	3
15	16	17
16	4	5
17	17	15
18	5	5
19	0	0
20	0	0
21	0	0
22	0	0
23	0	0

1983 FULL G.A. : G.A. COMPONENT

HOUR	CLASS 1	CLASS 2	CLASS 3	CLASS 4
0	0	0	0	0
1	0	0	0	0
2	0	0	0	0
3	0	0	0	0
4	0	0	0	0
5	0	0	0	0
6	0	0	0	0
7	0	0	0	0
8	0	0	0	0
9	0	0	0	0
10	0	0	0	0
11	0	2	6	2
12	0	3	21	7
13	0	6	18	7
14	0	3	3	2
15	0	6	24	3
16	0	1	4	4
17	0	4	23	5
18	0	0	7	3
19	0	0	0	0
20	0	0	0	0
21	0	0	0	0
22	0	0	0	0
23	0	0	0	0

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1983 FULL G.A. : G.A. COMPONENT

SECTION 3

1983 VFR, LIMITED G.A. BASELINE

C1-	59	(31/A,	28/D)
C2-	25	(12/A,	13/D)
DD-	29	(14/A,	15/D)
EA-	128	(62/A,	66/D)
F1-	5	(4/A,	1/D)
F3-	8	(7/A,	1/D)
F4-	42	(26/A,	16/D)
FF-	57	(27/A,	30/D)
GA-	82	(41/A,	41/D)
GG-	73	(37/A,	36/D)
HH-	61	(31/A,	30/D)
IA-	114	(62/A,	52/D)
TOTALS-	683	(354/A,	329/D)

AIRLINE	CLASS 1	CLASS 2	CLASS 3	CLASS 4
C1	0	59	0	0
C2	0	25	0	0
DD	13	16	0	0
EA	65	63	0	0
F1	2	3	0	0
F3	8	0	0	0
F4	20	22	0	0
FF	33	24	0	0
GA	0	20	62	0
GG	29	44	0	0
HH	27	34	0	0
IA	46	68	0	0

HOUR	ARRIVALS	DEPARTURES
0	0	0
1	0	0
2	0	0
3	0	0
4	0	0
5	0	0
6	0	0
7	0	0
8	0	0
9	0	0
10	0	0
11	48	21
12	52	52
13	44	57
14	42	33
15	60	34
16	41	35
17	36	62
18	31	35
19	0	0
20	0	0
21	0	0
22	0	0

1983 LIMITED G.A. : AIR CARRIER/G.A. BASELINE

HOUR	CLASS 1	CLASS 2	CLASS 3	CLASS 4
0	0	0	0	0
1	0	0	0	0
2	0	0	0	0
3	0	0	0	0
4	0	0	0	0
5	0	0	0	0
6	0	0	0	0
7	0	0	0	0
8	0	0	0	0
9	0	0	0	0
10	0	0	0	0
11	18	45	6	0
12	35	63	6	0
13	35	56	10	0
14	24	45	6	0
15	41	44	9	0
16	29	39	8	0
17	43	46	9	0
18	18	40	8	0
19	0	0	0	0
20	0	0	0	0
21	0	0	0	0
22	0	0	0	0
23	0	0	0	0

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1983 LIMITED G.A. : AIR CARRIER/G.A. BASELINE

C1-	59	(31/A,	28/D)
C2-	25	(12/A,	13/D)
DD-	29	(14/A,	15/D)
EA-	128	(62/A,	66/D)
F1-	5	(4/A,	1/D)
F3-	8	(7/A,	1/D)
F4-	42	(26/A,	16/D)
FF-	57	(27/A,	30/D)
GG-	73	(37/A,	36/D)
HH-	61	(31/A,	30/D)
IA-	114	(62/A,	52/D)
TOTALS-	601	(313/A,	288/D)

AIRLINE	CLASS 1	CLASS 2	CLASS 3	CLASS 4
C1	0	59	0	0
C2	0	25	0	0
DD	13	16	0	0
EA	65	63	0	0
F1	2	3	0	0
F3	8	0	0	0
F4	20	22	0	0
FF	33	24	0	0
GG	29	44	0	0
HH	27	34	0	0
IA	46	68	0	0

HOUR	ARRIVALS	DEPARTURES
0	0	0
1	0	0
2	0	0
3	0	0
4	0	0
5	0	0
6	0	0
7	0	0
8	0	0
9	0	0
10	0	0
11	44	15
12	47	48
13	37	50
14	37	30
15	55	28
16	37	30
17	30	57
18	26	30
19	0	0
20	0	0
21	0	0
22	0	0
23	0	0

~~1983 MITRE G.A. : AIR CARRIER COMPONENT~~

HOUR	CLASS 1	CLASS 2	CLASS 3	CLASS 4
0	0	0	0	0
1	0	0	0	0
2	0	0	0	0
3	0	0	0	0
4	0	0	0	0
5	0	0	0	0
6	0	0	0	0
7	0	0	0	0
8	0	0	0	0
9	0	0	0	0
10	0	0	0	0
11	18	41	0	0
12	35	60	0	0
13	35	52	0	0
14	24	43	0	0
15	41	42	0	0
16	29	38	0	0
17	43	44	0	0
18	18	38	0	0
19	0	0	0	0
20	0	0	0	0
21	0	0	0	0
22	0	0	0	0
23	0	0	0	0

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1983 LIMITED G.A. : AIR CARRIER COMPONENT

GA- 82 (41/A, 41/D)

TOTALS- 82 (41/A, 41/D)

AIRLINE	CLASS 1	CLASS 2	CLASS 3	CLASS 4
GA	0	20	62	0

HOUR	ARRIVALS	DEPARTURES
0	0	0
1	0	0
2	0	0
3	0	0
4	0	0
5	0	0
6	0	0
7	0	0
8	0	0
9	0	0
10	0	0
11	4	6
12	5	4
13	7	7
14	5	3
15	5	6
16	4	5
17	6	5
18	5	5
19	0	0
20	0	0
21	0	0
22	0	0
23	0	0

1983 LIMITED G.A. : G.A. COMPONENT

HOUR	CLASS 1	CLASS 2	CLASS 3	CLASS 4
0	0	0	0	0
1	0	0	0	0
2	0	0	0	0
3	0	0	0	0
4	0	0	0	0
5	0	0	0	0
6	0	0	0	0
7	0	0	0	0
8	0	0	0	0
9	0	0	0	0
10	0	0	0	0
11	0	4	6	0
12	0	3	6	0
13	0	4	10	0
14	0	2	6	0
15	0	2	9	0
16	0	1	8	0
17	0	2	9	0
18	0	2	8	0
19	0	0	0	0
20	0	0	0	0
21	0	0	0	0
22	0	0	0	0
23	0	0	0	0

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1983 LIMITED G.A. : G.A. COMPONENT


DATE:
TIME